



United States Department of the Interior

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BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

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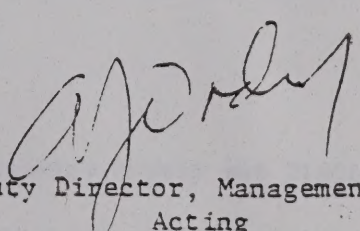
To: All Washington Office and Field Officials

From: Director

Subject: Bureau Mapping Study

This is to inform you of the initiation of a Bureauwide study of our mapping programs and the technologies associated with these programs. The utility of maps and map products to land managers, resource specialists, land use planners, and members of the general public who use the public lands are obvious to us all. The purpose of this Bureauwide review is to assure that the Bureau is obtaining appropriate and necessary mapping products in a timely and cost-efficient manner. The emphasis upon appropriateness of products and cost-efficiency is, as you know, becoming increasingly critical in view of competing program priorities for limited money, manpower, and equipment. This Bureauwide review will be conducted by the Division of Management Research, (WC-840) and the DSC Division of Organization and Management Systems (D-540). A selected group of Bureau personnel representing a cross-section of mapping users and producers will be utilized as consultants by the Study Team. To minimize travel costs, emphasis is being placed upon the use of questionnaires and printed data formats which will be tailored to the current organization, equipment, personnel component of each State's mapping function and distribution of map users.

I urge all of you to be responsive to the requests of this study effort.


Deputy Director, Management Services
Acting

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Denver Federal Center
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Denver, CO 80225

Enclosure 1

Bureau-Wide Mapping StudyInstructions/Definitions

1. Complete the user identification section at the top of each questionnaire. We are requesting your names and telephone numbers, should the study team require additional information.
2. There are no "correct" answers since this is a data gathering effort. Please respond to those areas to which you are familiar. If you have no comment please indicate as such. (N/C)
3. Interrelated questionnaires are being submitted to map producers and map users throughout the Bureau.

Questionnaire A - SO Map Producing Supervisor

Questionnaire B - SO/DO Mapping Personnel (Non-Supervisory)

Questionnaire C - Map User - Supervisory (SO/DO/WO)

Questionnaire D - Map User - Functional Specialist

4. Please submit your questionnaire responses (via Blue Envelope) through your Associate State Director no later than October 15, 1982. Should you have any questions, please contact Roger Molinar or Roz Warren at FTS 234-2389, DSC.
5. Should additional space be needed for narrative comments, please use back of page.
6. Definitions

Map Products

The definition of map products for this questionnaire should be understood to include, but not limited to, the following types of products and services:

1. Thematic Maps
2. Topographic Maps
3. Planimetric Maps
4. DEM's and DLG's (Digital Elevation Models and Digital Line Graphics)
5. Aerial Photo Projects
6. Lithographic Reproduction
7. Photographic Reproduction
8. Remote Sensing

Map Producers

Those personnel who are classified in the cartographic GS-1370 series, cartographic technicians GS-1371, those persons working as aerial photography specialists, photogrammetry specialists, and those working in a photolab.

1. *Chlorophyll a*

MAPPING STUDY
QUESTIONNAIRE A

Name: _____
Involvement in Mapping Program: _____
Title, Series: _____
Org. Code: _____
Telephone: _____

*SO Map Program Supervisor

Personnel

1. Please update/correct the attached employee roster (Attachment A-1). We are interested in identifying those personnel directly associated with the production of map or mapping-related products. Please use the definition contained in the cover memo.

- 1a. Would you please list all personnel under your supervision with remote sensing, digital mapping work, and all products included in the definition of "mapping" who are not on this listing.

Investment in Mapping Program

Title, Series:

City, State:

Telephone:

1970-1971 Progress Report

Personnel

1. Please restate the attached and/or the report (Attachment A-1). We are interested in identifying those persons directly associated with the production of maps or map-related products. Please use the definition contained in the report.

2. Please list all personnel under your supervision with remote access, digital mapping work, and all products included in the definition of "mapping" as set out in this listing.

1b. To the best of your ability, please identify how many work-months will be expended in FY 83 in statewide mapping production.

1c. To the best of your ability, please identify how many work-months were expended in FY 82 in statewide mapping production.

Equipment

2. Please update/correct the attached property listing (Attachment A-2). We are interested in identifying that property directly associated with the production of mapping products and whether it is assigned to a mapping unit or another unit.

2a. Please identify current equipment not on the attached listing which is used in your mapping program.

List:

- 2b. Please provide, to the best of your ability, the original dollar value of the equipment listed in question 2a.

List:

Planning Process

1. Do you have a system (log, PPE, etc.) to help identify the type and value of assets provided by each region?

Yes _____

No _____

2. If yes, please provide a brief description.

- 2c. What type of equipment have you or will you excess in the FY 82-83 period?

List:

1. Within the state, is there a central clearinghouse/coordination unit for all moving planning and coordination?

Yes _____

No _____

2. If yes, please identify who has this responsibility and how are requests submitted for planning purposes.

Signature: _____

- 2d. Identify that equipment which would enhance your current program in terms of efficiency or quality.

List:

Product Identification

3. Please complete the chart-form questionnaire (Attachment A-3) and return it with the rest of the package.

Planning Process

4. Do you have a system (log, PIPR, etc.) to help identify the type and volume of maps produced by each employee?

Yes _____

No _____

- 4a. If yes, please provide a brief description.

5. Within the state, is there a central clearinghouse/coordination point for all mapping planning and productions.

Yes _____

No _____

- 5a. If yes, please identify who has this responsibility and how are requests submitted for planning purposes.

Narrative:

5b. If no, how are planned and unplanned requests handled.

Narrative:

If "yes", can you estimate by percent, what each activity's contribution will be for FY 83? (We realize that, at this time, the FY 83 budget has not been determined; however, the FY82 process has probably provided you with some data upon which to make an estimate.)

6. What is the mechanism for determining the volume of maps ordered or produced by:

a. USGS:

b. DSC:

c. SO:

d. Other:

7. Will all mapping products produced in the state be paid for in FY 83 by the benefitting activity?

Yes _____

No _____

If "yes", can you estimate by percent, what each activity's contribution will be for FY 83? (We realize that, at this time, the FY 83 budget has not been determined, however, the PAWP process has probably provided you with some data upon which to make an estimate.)

8. Is there sufficient benefitting activity funding for FY 83 to cover _____ part or _____ all onboard map producers as defined in the cover memo to this questionnaire?

- 8a. If you cannot support all personnel, please identify in workmonths the anticipated shortfall.

9. Regarding Bureauwide mapping, is there clear instruction from the Washington Office level on funding and the source of production (central, local)?

Yes _____

No _____

If "no", could you briefly describe how WO might be able to assist you? For example, should specific map types be produced only at certain locations with a special source of funding, etc.?

10. What is the state policy regarding mapping products sales such as recreation maps, minerals maps, etc., with regard to pricing and availability?

- 10a. What is the state policy regarding aerial photography mapping products sales, with regard to pricing and availability?

11. How is the variety of mapping services and products available to Bureau personnel, made known to field level personnel? (catalogue, listings, etc.)

Narrative:

12. Are there mapping products currently produced at the state level, District level, or at DSC which you feel should be produced at another level?

Narrative:

- 12a. With regard to the above products, are there any which should be produced by another agency?

Narrative:

13. Are there map products not currently available to the Bureau which should be produced by the Bureau?

Yes _____

No _____

- 13a. If "yes", what are they, and where should they be produced?

Narrative:

14. How do you meet your photogrammetric needs?

_____ In-House

_____ DSC

_____ Contract

_____ Combination of Sources (Please specify what part of the process
is done by which source.)

15. How do you meet your photolab needs? (Include litho-reproduction and photo-
reproduction.)

_____ In-House

_____ DSC

16. Please provide the name and location of the remote sensing personnel in
your state office, include phone.

17. Do you ask for technical assistance from the aerial photography staff
(D-410) at DSC for contracts under \$10,000?

Yes _____

No _____

17a. Do you ask for technical assistance from the aerial photography staff
(D-410) at DSC for contracts over \$10,000?

Yes _____

No _____

18. Within the next 2-5 years, in your office, do you anticipate map production
methods to change? If so, please specify how and what impact this will have,
e.g., equipment purchase, skill mix change, training needs*, more or fewer
employees, etc.

*See next section on training needs.

Narrative: (Writing space continued on next page)

Narrative:

Will this change the type of map production in your office?

Yes _____

No _____

If yes, how?

Narrative:

Narrative:

Training - Needs Assessment

19. Do you feel that there are adequate training opportunities for SO mapping personnel?

Yes _____

No _____

19a. If no, how is your mapping program being adversely affected?

Narrative:

Basic Cartography

Advanced Map Design

Auto-Cartography

Photo-Interpretation

Other

21. Who should be responsible for conducting mapping training programs? (SO, DO, Other Agencies, Private, etc.)

20. What training methods are currently available to SO/DO mapping personnel? (On-the-job training, formal courses - identify source)

Narrative:

Organization Structure

24. Please identify the current organizational location of mapping functions in your state. If possible, please provide current organizational chart.

21. What type of training courses should be emphasized? (Please prioritize, 1-5)

_____ Basic Cartography

_____ Advanced Map Design

_____ Auto-Cartography

_____ Photo-Interpretation

_____ Other _____

22. Who should be responsible for conducting mapping training programs? (SO, DSC, Other Agencies, Private, etc.)

23. How can training programs be evaluated to measure their effectiveness?

25. Please discuss any other related issues, concerns or problems you feel were not adequately covered in the preceding questions.

Organization Structure

24. Please identify the current organizational location of mapping functions in your state. (If possible, please provide current organization chart.)

- 24a. Would you briefly describe how you would like to see the mapping organization established in your state, all states, DSC or on a Bureauwide basis. This could take into account options for better career development and the issue of map/photo/film storage, etc.

Narrative:

25. Please address any other related issues, concerns or problems you feel were not adequately covered in the preceeding questions.

MAPPING STUDY
QUESTIONNAIRE B

Name: _____
Organ. Code: _____
Title: _____
Type of Products you Produce: _____

Non-Supervisory Map Producer - SO

1. How are assignments made to you? For example; are you told the type, volume of map products to be produced which is tied into a formal system such as a log or your PIPR.

Narrative:

2. Could this system be improved?

Yes _____
No _____

- 2a. If "yes", how?

Narrative: (Writing space continued on next page)

3. In comparison with other Federal Agency programs, I would rate the mapping program I work with:

- (1) Below Average _____
- (2) Average _____
- (3) Above Average _____
- (4) Not that familiar with other agency programs _____

4. State in your judgement the greatest strength of the mapping program.

5. State briefly in your judgement the greatest weakness of the mapping program.

6. What do you view as the five year goals of the current mapping program?

7. Check the appropriate answer:

How important do you feel the mapping program is to overall Bureau objectives?

- (1) Top priority _____
- (2) Very important _____
- (3) Important _____
- (4) Not so important _____
- (5) Unimportant _____

8. Thinking ahead five years, would you still want to work for the Bureau?

- a.
 - (1) Yes _____
 - (2) Maybe _____
 - (3) No _____
 - (4) Hadn't thought about it _____

b. In the mapping program?

- (1) Yes _____
- (2) Maybe _____
- (3) No _____
- (4) Hadn't thought about it _____

9. Within the next 2-5 years, in your office, do you anticipated map production methods to change? If so, please specify how and what impact this will have, e.g., equipment purchase, skill mix change, training needs*, more or fewer employees, etc.

Will this change the type of map product in your office?

Yes ☐

No ☐

If "yes", how?

Narrative:

Organization Structure

10. Would you briefly describe how you would like to see the mapping organization established in your state, all states, DSC or on a Bureau-wide basis. This could take into account options for better career development and the issue of map/photo/film storage, etc.

Training - Need's Assessment

11. Do you feel that there are adequate training opportunities for your state's mapping personnel?

Yes

No

- 11a. If "no", how is your mapping program being adversely affected?

12. What training methods are currently available to SO/DO mapping personnel?
(On-the-job training, formal courses - identify source.)

13. What type of training courses should be emphasized? (Please prioritize, 1-5)

 Basic Cartography
 Advanced Map Design
 Auto-Cartography
 Photo-Interpretation
 Other _____

14. Who should be responsible for conducting mapping training programs? (SO, DSC, Other Agencies, Private, etc.)

15. How can training programs be evaluated to measure their effectiveness?

16. Please address any other related issues, concerns or problems you feel were not adequately covered in the preceding questions.

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
MAP USER-FIELD MANAGER
(DM, AM)

1. Do you consider maps or map related products, as an integral part of your planning/resource management efforts.

Yes _____
No _____

If "yes", how important is the program to you, and what extent of funding support do you contribute?

2. Do you budget for the production of maps and map products through the AWP process?

Yes _____
No _____

If "no", describe how map production needs are met.

3. Please identify the variety of maps utilized by source, map type, funding and use. (Attachment C-1, should be used to convey this information.)

4. What is the state policy regarding availability and pricing of map or map product sales?

5. Are there mapping products being produced at the DO, SO or Service Center level which you feel should be produced at another level? (Specify) -
(Writing space continued on next page)

5. Is there a central communication system within the SO with whom you can discuss all mapping planning and production problems/issues? (Yes/No)

6. Are there map products not being produced in the Bureau which should be? (Specify)

8. Was there a need for any mapping related training for your field personnel in FY-2017?

Yes _____
No _____

9. Is there a need for any mapping related training for your field personnel in FY-2018?

7. Are there map products being produced or purchased by the Bureau which should not be? (Specify)

10. What uniquely significant S&M features (Status, Status, Coordinates) should be included on Japan map?

8. Is there a central coordination contact within the SO with whom you can discuss all mapping planning and production problems/needs? Who?

Yes _____
No _____

10b. If "yes", what information is available to identify important BLM features into our mapping products?

9. Was there a need for any mapping related training for your field personnel in FY-82?

Yes _____
No _____

Is there a need for any mapping related training for your field personnel in FY-83?

Yes _____
No _____

10. What uniquely significant BLM features (Status, Admin. Boundaries) should be included on Bureau maps?

10a. Do you have the opportunity to make input into map features?

Yes

No

10b. If "yes", what mechanism is available to formally incorporate these features into our mapping process?

10c. If there is no formal mechanism, how do you or would you incorporate changes?

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE D
MAP USER-FUNCTIONAL SPECIALISTS
(Bureau Planners, Resource Specialists, Etc.)
(WO, DO, RA, SO)

1. Do you utilize map or map related products as an integral part of your work accomplishments?

Yes _____

No _____

2. Please identify the most commonly used map(s) or map products used by your functional entity. (Examples: Rec. Maps, Topo Maps, DEM's, Aerial Photos, etc.) Does your functional activity contribute funding for the production of any/all maps used?

3. Are these map products produced at the

____DO ____DSC ____SO ____Other Agency ____Other

4. Is there a central coordination contact within the DO/SO with whom you can discuss your mapping needs?

Yes _____

No _____

If "yes", who? _____

5. Can you identify any mapping related training which could improve your ability to perform your function?

Yes _____

No _____

If "yes", would you consider this a top priority training need?

Yes _____

No _____

6. Check the appropriate answer:

How important do you feel the mapping program is to overall Bureau objectives?

- (1) Top priority _____
- (2) Very important _____
- (3) Important _____
- (4) Not so important _____
- (5) Unimportant _____

7. Should BLM pursue the production of a map with multi-agency features such as USFS, USFW, County, State, and BLM data on one map where all entities occupy adjacent lands?

Yes ☐

No ☐

If "yes", what features should be depicted and at what scale?

8. Please address any other related issues, concerns or problems you may have regarding your mapping related needs.

Reason for Production or Purchase. (Range, Forestry, Fire, Recreation, Transportation, etc.)

Funding Code(s) Used
for Production or Purchase

Plan to Order in FY-83	Quantity
Y=Yes, N=No	

Please use one sheet for each separate map type (just xerox copies of the questionnaire as needed). Some types, such as the 1:100k will probably take a long time to complete because of its wide use, while others will be very quickly completed.

Some map types which might be included are: 1:500k, 1:100k, 24k, 1:250k, 1:1,000,000k, 15 min., 7½ min. topo, 7½ min. orthophoto; RDS, slope maps, planimetric, recreation maps, digital elevation model, digital line graphic, photoreproduction work, etc.

Note: Through this chart, the team wants to identify the purchasers and primary users of maps in your office. Also, through this chart, the team wants to identify benefitting activities which may not be directly contributing to map costs.

[illegible]

TRAINING

- Develop a "Basic Cartography for Map Producer's" course. (#1 Training Priority)

- Auto-Carto Training

- Inter/Intra Agency Effort

- Centralized

- Vendor Input

- Determine effectiveness of training courses:

- Proficiency Test

ORGANIZATION

- Location of Functional Activities

- | | |
|--------------------|---|
| Basic-Carto | - S.O. Level |
| Auto-Carto | - DSC and Pilot States (Phase I) |
| Photogrammetry | - Centralized ESO and Alaska (Workload Based) |
| Aerial Photography | - S.O., DSC-As Requested |
| Photo-Lab | - Status Quo. |

- Role Clarification

- | | |
|------|--|
| S.O. | - Operational |
| DSC | - Coordinate Developmental Activity Limited
Operational, Scarce Skill Staff Support |
| WO | - General Guidance, Regulatory/Compliance
Oriented |

Organizational Implications

- S.O. Level - Deputy SD - Operations

Branch of Engineering and Mapping Services

or Branch of Mapping Services

- DSC Level (Current - ASCD Technical & Scientific Systems
Organization)

Div. of Survey & Mapping Systems Div. of Scientific Systems

Br. of Survey & Mapping Br. of Scientific Systems

Development Development

Br. of Cartometrics Br. of Scientific Systems

Application

- WO - Alternative #1 - Assistant Director Technical Services

Division of Cadastral and Mapping

Branch or Staff of Mapping

- Alternative #2 - Assistant Director Technical Services

Division of Engineering & Mapping

Branch or Staff of Mapping

PLANNING & BUDGET

- All programs should provide some base funding for Mapping Support.
- Establish subactivity for mapping support (Developmental & Operational).
- Copy fee accounts should revert to mapping subactivity with potential for carry-over of surplus funds following the Fiscal Year.
- If mapping subactivity not established, process for recovering map sales should be established so that money may be used for mapping purposes.
- Prepare bureauwide map product pricing policy for BLM and other agency products. Clarify those products which are to be given away (B&W).
- Bureauwide mapping standards should be enforced by Washington Office.
- Map producers should be kept better informed of policies and program needs.

- All programs should provide some base funding for Mapping Support.
- Establish a separate fund for mapping support (Developmental & Operational).
- City has resources should revert to mapping support with potential for carry-over at surplus funds following the fiscal year.
- If mapping support is not established, process for requesting new raises should be established so that money may be used for mapping purposes.
- Prepare a memorandum and produce pricing policy for ERM and other agency programs. Clearly those programs which are to be given away (ERM).
- Establish mapping standards should be adopted by Management Office.
- New standards should be kept better informed of policies and program needs.

PRODUCT IDENTIFICATION

- Establish Mapping Procedures Review (MPR) System
 - Product
 - Systems
- Annual Product Assessment
- Update Product Catalogue

EQUIPMENT

- Maximum Utilization of Equipment

- Feedback from Study

- Equipment Compatability

- Placement of Onshore Mapping Personnel - (Refer to Attachment #1)

- Team analysis of water mapping efforts - (Refer to Attachment #2)

- Further analysis of Field Questionnaire Responses.

- WD-700

- WD-702

- WD-710

- WD-720

- 50

- 250

- Future of 1:100K Series.

ISSUES, CONCERNS & PROBLEMS

ONSHORE CARTOGRAPHIC TECHNICIANS - STATE OFFICE PLACEMENT PLAN

- Morale of Field Map Producers

- Feedback from Study

Location

Tulsa, OK

Minneapolis, MN

- Placement of Onshore Mapping Personnel - (Refer to Attachment #1)

Farmington, NM

Employees will remain at current duty stations which correspond with agency

- Team analysis of other mapping efforts - (Refer to Attachment #2)

CALIFORNIA

- Further analysis of Field Questionnaire Responses.

Merced Park, CA

- WO-200 July 68-7 can be accommodated in Sacramento.

- WO-500 will be offered positions if become available. Merced Park to be

- WO-730 closed July 3-July. Personnel may have to be released.

- WO-720

- SO

Location

- DSC

Billings, MT

Has been assigned, at same grade, to Miles City Solida Branch which is located in Billings. May be transferred to Printing and Graphics Section with HSC-01.

- Future of 1:100k Series.

WYOMING

No. Grade Location

3 8,9,10 Casper, WYO

Two employees will remain in Casper. One will transfer to Rock Springs. Classifications will be reviewed.

COLORADO

No. Grade Location

2 10,9 Denver Federal Center

Will relocate to Branch of Cartographic Services, Colorado State Office as CS-9 Section Chief.

ONSHORE TOPOGRAPHIC TECHNICIANS - STATE OFFICE PLACEMENT PLANS

NEW MEXICO

<u>No.</u>	<u>Grade</u>	<u>Location</u>
1	9	Tulsa, OK
1	9	Roswell, NM
2	9,8	Albuquerque, NM
1	7	Farmington, NM

Employees will remain at current duty stations which correspond with heavy minerals workloads. Classifications will be reviewed.

CALIFORNIA

<u>No.</u>	<u>Grade</u>	<u>Location</u>
3	8,8,7	Menlo Park, CA

At this point, only GS-7 can be accommodated in Sacramento.

GS-8 personnel will be offered positions if become available. Menlo Park to be phased out by mid-July. Personnel may have to be released.

MONTANA

<u>No.</u>	<u>Grade</u>	<u>Location</u>
1	8	Billings, MT

Has been assigned, at same grade, to Miles City Solids Branch which is located in Billings. May be transferred to Printing and Graphics Section with MMS-oriented assignment.

WYOMING

<u>No.</u>	<u>Grade</u>	<u>Location</u>
3	8,9.10	Casper, WYO

Two employees will remain in Casper. One will transfer to Rock Springs. Classifications will be reviewed.

COLORADO

<u>No.</u>	<u>Grade</u>	<u>Location</u>
2	10,9	Denver Federal Center

Will relocate to Branch of Cartographic Services, Colorado State Office as GS-9 Section Chiefs.

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NEW YORK

Bureauwide Mapping Study
Questionnaire A
Summary of Responses

PERSONNEL

--Refer to Enclosure 1 for visual comparison of estimated work month expenditures for Fiscal Years 82-83.

--Qualifying Statements:

--Target Group: This questionnaire was completed by the State Office supervisor most familiar with the state's overall mapping program. In several states, remote sensing is not under the mapping supervisor or other parts of the mapping program are scattered among several organizations.

--Arizona included Mining Recordation personnel in their WM estimates.

--Responses were from eleven SOs, ESO and DSC.

Enclosure 1 does not necessarily include Remote Sensing personnel.

--Issue Identification and Analysis

--44% of identified Bureauwide WM for mapping support personnel are located in three states (Alaska, Wyoming, Colorado).

--An additional 23% is located in DSC, therefore, three states plus DSC account for 67% of all Bureau mapping WM.

--Ten offices showed either equivalent or decreased WM estimates from the previous fiscal year. This accounts for a Bureauwide decrease of ~~97~~⁸⁷ WM. However, three states (Alaska, Montana, California) show an overall increase of mapping related personnel accounting for an increase of 50 WM.

37

Bureauwide we have an estimated overall decrease of ~~47~~ WM.

(NOTE: DSC decrease amounted to 14% (50 WM).

Wyoming decrease amounted to 9% (26 WM).

Utah decrease amounted to 17% (10 WM).

Alaska increase amounted to 25% (40 WM).

Montana increase amounted to 60% (9 WM).

--Geographical proximity: Colorado/DSC/Wyoming amount to 51% of all Bureau mapping WMs (excludes MTP-Plat Drafting personnel).

--Remote Sensing personnel are usually not included with mapping related organizations. Seventy-five (75) percent of Remote Sensing personnel are not located with other map-producing personnel.

(Refer to Enclosure 2.)

Geographical Distribution: Countries/Regions where the 70% of

all forest mapping was conducted (N/A - Global personnel).

Personnel working personnel are usually not included with mapping

related organizations. Twenty-five (25) percent of forest mapping

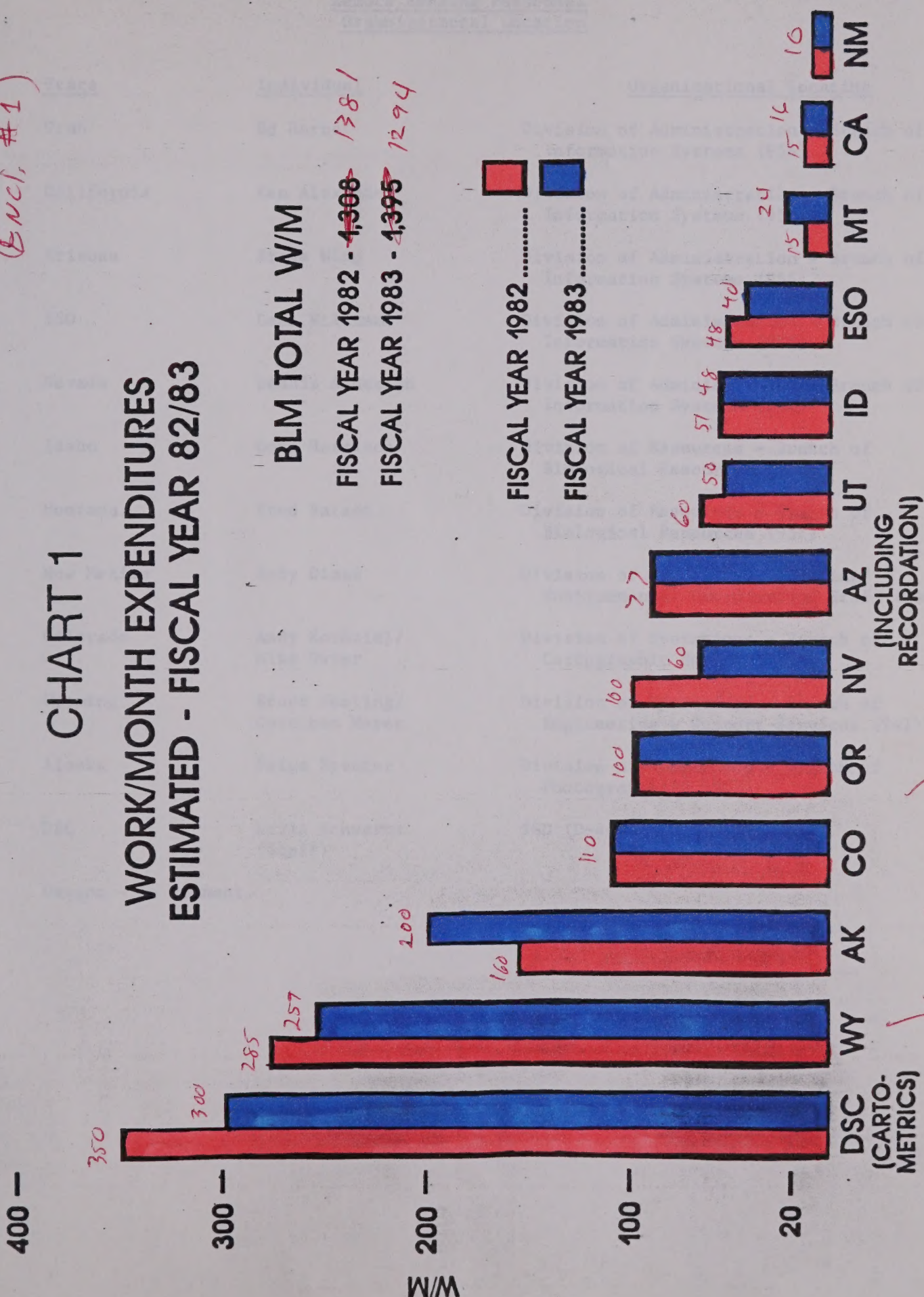
personnel are not located with other non-foresting personnel.

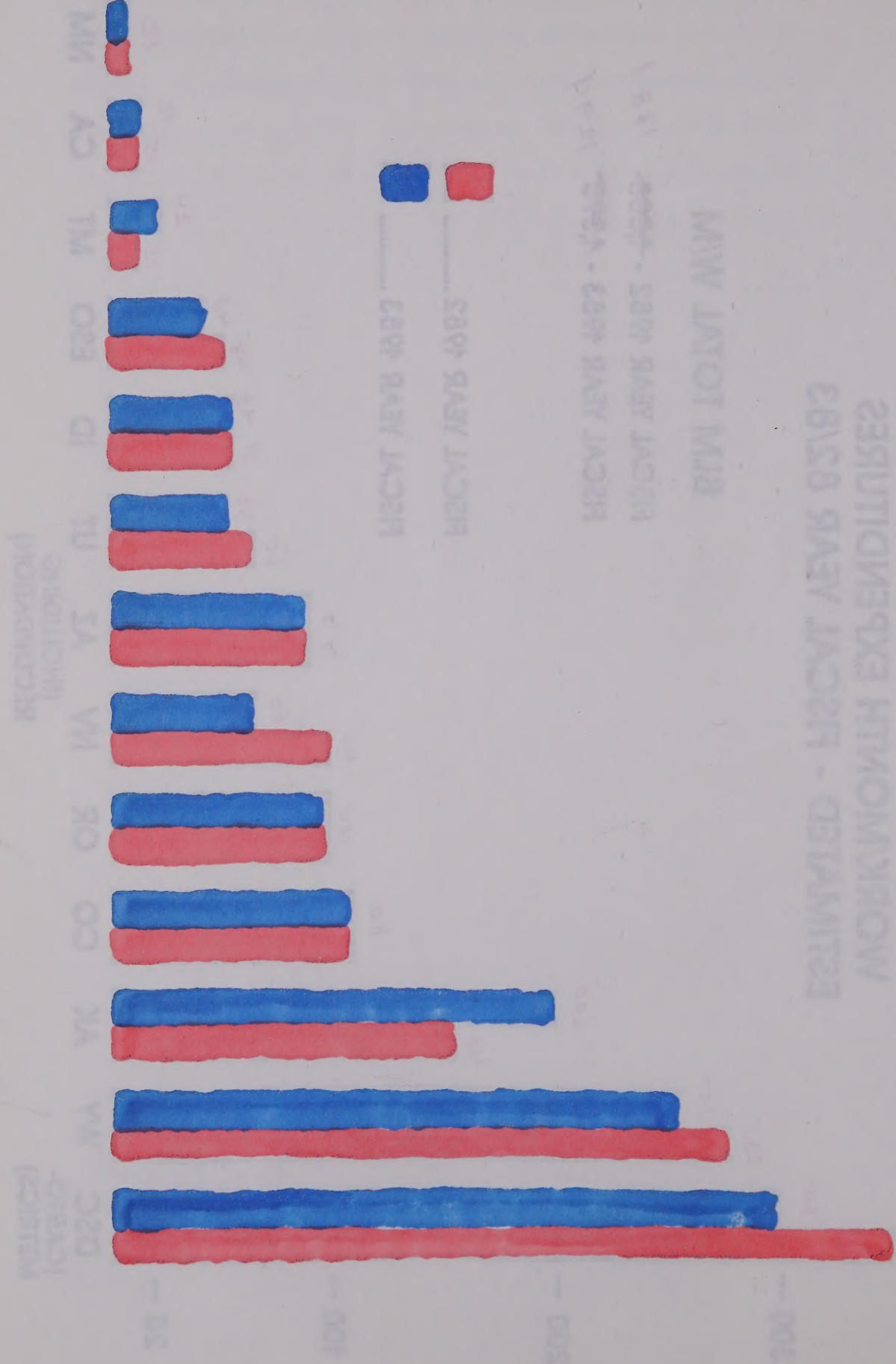
(Refer to Enclosure 1.)

(Encl. #1)

CHART 1

WORK/MONTH EXPENDITURES ESTIMATED - FISCAL YEAR 82/83





ESTIMATED - 1982 - 1983
WORKING WITH THE

1982

Remote Sensing Personnel
Organizational Location

<u>State</u>	<u>Individual</u>	<u>Organizational Location</u>
Utah	Ed Harne	Division of Administration - Branch of Information Systems (954)
California	Ken Alexander	Division of Administration - Branch of Information Systems (954)
Arizona	Steve Wing	Division of Administration - Branch of Information Systems (954)
ESO	Lenn Williams	Division of Administration - Branch of Information Systems (955)
Nevada	Dennis Anderson	Division of Administration - Branch of Information Systems (954)
Idaho	Doug Harrison	Division of Resources - Branch of Biological Resources (931)
Montana	Fred Batson	Division of Resources - Branch of Biological Resources (931)
New Mexico	Andy Dimas	Division of Resources - Planning/ Environmental Coordination Staff (934A)
Colorado	Andy Kordziel/ Mike Dwyer	Division of Operations - Branch of Cartographic Services (945)
Wyoming	Bruce Keating/ Gretchen Meyer	Division of Operations - Branch of Engineering & Support Services (941)
Alaska	Paige Spencer	Division of Operations - Branch of Photogrammetry (907)
DSC	Lorin Schwartz (Staff)	SSD (D-442)
Oregon - No comment.		

Bureauwide Mapping Study
Questionnaire A
Summary of Responses

EQUIPMENT

--Refer to Enclosure 3 for visual comparisons.

--Qualifying Statements

--Equipment value compiled from original purchase price.

--Mapping-related equipment sometimes picked up as surplus with no major expenditure to BLM.

--Mapping-related equipment, may have been purchased with Cadastral funds (in support of Cadastral Program).

--ADP-related equipment serves multi-activity support (not just mapping).

--No attempt made to identify various activity codes used to purchase mapping-related equipment.

--Issue Identification and Analysis

--Bureauwide mapping-related equipment is worth approximately \$3.5 million.

--Fifty-four (54) percent of equipment located in two states (Alaska/Wyoming).

--Equipment purchases in support of mapping-related activities are not necessarily purchased for a Mapping Program, per se, but rather as support for on-going programs.

--Colorado/Wyoming/DSC account for thirty-four (34) percent of dollar value of mapping-related equipment.

--Alaska also accounts for thirty-five (35) percent, probably due to program size and state-of-the-art equipment.

--No apparent cross identification of Bureau mapping equipment excesses and mapping equipment needs. (Refer to Enclosure 4.)

CHART 2

ESTIMATED VALUE MAPPING RELATED EQUIPMENT IN THOUSANDS OF DOLLARS

BLM TOTAL - 3,489,817

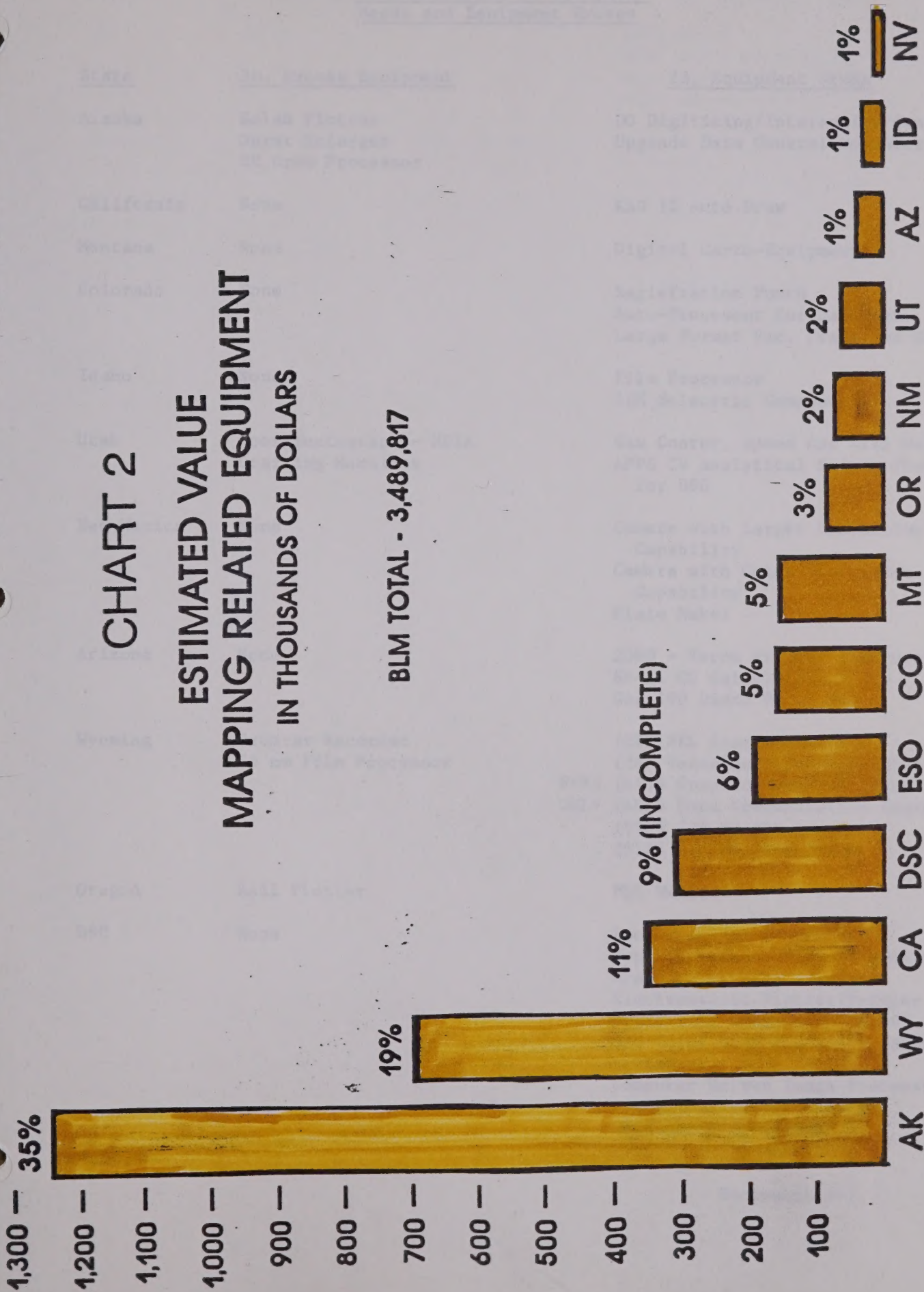


CHART 5

ESTIMATED AVIATION

TEMPERATURE EQUIPMENT

IN THE COURSE OF CONDUCT

THESE ARE - JACOB MARR



Identification of Equipment
Needs and Equipment Excess

<u>State</u>	<u>2c. Excess Equipment</u>	<u>2d. Equipment Needs</u>
Alaska	Kelsh Plotter Durst Enlarger EK Drum Processor	DO Digitizing/Interactive Graphics Upgrade Data General Computer
California	None	KAD II Auto Draw
Montana	None	Digital Carto-Equipment
Colorado	None	Registration Punch Auto-Processor for Darkroom Large Format Vac. Frame for Darkroom
Idaho	None	Film Processor IBM Selectric Composer
Utah	Coordinatograph - MDIA Drafting Machines	Wax Coater, Speed Cot 1215 Daize APPS IV Analytical Stereo Plotter for DSC
New Mexico	None	Camera with Larger Production Capability Camera with Color Production Capability Plate Maker
Arizona	None	2080 - Xerox Printer (MTP-use) HP-41 CU Calculators (2) GAF 190 Diazo Print Vac
Wyoming	Prostar Recorder 35 mm Film Processor	(ZTS BEL Stereo Plotter (36" Versatec Printer/Plotter FY83 (4114 Graphic Terminal Lease ONLY (ALMS Data Communication Board (8655 128 MB CPU Board (6122 277 MB Disk Drive
Oregon	Rail Plotter	PUC Marker
DSC	None	Zoom Transfer Scopes (4) Type Composer - Photo-Typesetter Graphics Display Terminal Electrostatic Plotter/Printer Digitizing Tablets 30" x 40" 3/4 Color Drum Plotter or Flatbed Plotter Computer Driven Image Processor Analytical Stereo Plotter Orthophoto Equipment

<u>State</u>	<u>2c. Excess Equipment</u>	<u>2d. Equipment Needs</u>
ESO	None	2080 Xerox 3000 Ozlid Diezoprinter Data Scribe III Mini Computer with Plotter
Nevada	NUARC 17" x 22" Vac. Frame	Data General Computer and Disk Drive Two Digitizing Stations 35" Drum Plotter

Bureauwide Mapping Study
Questionnaire A
Summary of Responses

Product Identification

Unfortunately only six out of twelve State Office map producers attempted to prepare a detailed identification of map products.

It was the team's intent to compare the field managers identification of map products with that of the State Office-map producing supervisor. A comparison of map products between states was another intended purpose to this section.

(Refer to Enclosures 5-1 through 5-6.)

Questionnaire A

Product Identification

Map Type	Scale	Funding	Modifications		Production/Purchase Source	Modification Source				
			Scale	Features		SO	DO	RA	DSC	Other
WYOMING										
Surface & Mineral Status (color quads)	1:126,720	4800, 4220	1/2"=1 mile	VRA, O&G Revision, Transportation	SO, DSC	X	X	X		
Orthophotoquad	1:24,000 7 1/2 minute	4322, 4112	1:24,000	SVIM, Soil, Allotments, Fences, Improvements	Multi-Agency					
Topo Masters	1:24,000 7 1/2 minute	4111, 4112, 4322, 4340	1:24,000	Roads & Minerals	USGS, WSO	X				
Surface & Mineral Status	1:100,000 1/2" x 1"	4111, 4112, 4114, 4310, 4322, 4340, 4350, 4920			SO, DSC, USGS					
Topo Negatives	1:100,000 1/2" x 1"	4111, 4112, 4323, 4340	1:200,000	Recreation	USGS, DSC					
Recreation	1:200,000 1" x 2"	All Major Subactivities, 4920			SO, State, USGS					
1/4"=1 mile Topo Masters	1:250,000 1" x 2"	4111, 4112, 4322	1:250,000		USGS	X				
Surface & Mineral Maps	1:500,000 & 1:1,000,000	4800, 4920	1:500,000 & 1:1,000,000	Status, Districts	USGS, WSO, DSC	X				

Map Type	Scale	Funding	Modifications		Production/Purchase Source	Modification Source			
			Scale	Features		SO	DO	RA	DSC
WYOMING (Continued)									
Resource Aerial Photo	1:24,000 Nat. Color, IR, Both	4111, 4112, 4114, 4322, 4340			SO Contract				
Photo Repro Work	1:24,000, 1:126,720, 1:100,000	All Major Subactivities	1:24,000	Misc. Field Data	WSO				
Digital, Coal Data Input	1:24,000 7½ minute	4112			DO, SO, FWS				
Digital, Vegetation, Land Use	1:24,000 7½ minute	4112, 4350			FWS/BLM, SO				
Digital, O&C	1:24,000 7½ minute	5100, 7150, 4111			WSO				
Digital, Cover Vegetation (LANDSAT)	Various Scales	4322, 4350, 4111, 4340, 4420			DO/SO, DSC				
DEN's (Slope, Aspect, Range, Visibility, Ancillary)	7½ minute	4111, 4350			USGS				
Slope Maps	1:24,000 7½ minute	4111, 4350, 4420			DSC, WSO				
Digital, Ownership, Surface Status	1:24,000 7½ minute	4322, 4340, 4111, 4112	1:24,000	Ownership	SO				

Map Type	Scale	Funding	Modifications		Production/Purchase Source	Modification Source				
			Scale	Features		SO	DO	RA	DSC	Other
WYOMING (Continued)										
Digital, Soils	1:24,000 7 1/2 minute	4322, 4340	1:24,000	Soil Types	DO/SO		X			
Digital, SWA Maps	1:24,000 7 1/2 minute	4322	1:24,000	Site Writeup Areas	DO/WSO					
Digital, Allotment, Pasture, Management	1:24,000 7 1/4 minute	4322	1:24,000	Admin.	SO/WSO	X	X	X		
Thematic (Document Support)	Various Scales	4111, 4112, 4310, 4322, 4332, 4337, 4350, 4410	1:250, 1:500, 1:1,000, 1:126,720, etc.		SO	X	X	X		
ARIZONA										
Surface/Mineral Mgmt. Responsibilities	1:500,000, 1:1,000,000	4330-0118		Public Sales	SO	X				
Surface/Mineral Status	1:100,000	4111, 4113, 4213		Public Sales	SO/DSC	X			X	
Topo (National)	1:250,000	Benefitting Activity			USGS, Private, SO-Photolab					
Topo	15 minute, 7 1/2 minute	Benefitting Activity	Yes?	Yes?	USGS, Private, SO-Photolab	X	X	X		
Ortho Photo Quads	??	Benefitting Activity			SO/DO					

Map Type	Scale	Funding	Modifications		Production/Purchase Source	Modification Source				
			Scale	Features		SO	DO	RA	DSC	Other
ARIZONA (Continued)										
Photo Repro	Various Scales	2230, 4111, 4132, 4310, 4322, 4333	Yes?	Yes?	SO	X	X	X		
Wilderness Status	1:1,000,000	4332		WSI, ISA Updates	SO/SO/DSC	X	X	X	X	
Arizona General Highway	1/2"=1 mile	4111	1"=1,000', 1"=2,000'	Yes	Arizona State Trans. Dept.	X	X	X		
BLM/Arizona State Ownership	1/2"=1 mile	4920	Yes	Surface Ownership	BLM/Arizona State Land Dept.	X				
MONTANA										
ELS Graphics	Various Scales	4111, 4112, 4340	Various Scales	Admin.	SO	X	X			
NONE TO DATE-----										
DEN/DIGs										
Slope (Range, Forestry, Fire)	??	??	1:24,000	Admin.	USGS	X	X	X		
Planning Unit Maps	??	All	1:63,360	Admin.	DO/SO		X			
Public Lands (Recreation)	1:31,680	4920			GPO				X	
Administration	1:500,000	4920	1:500,000	Land Status	DSC	X				
Surface (Trans. Plan)	1:100,000	2230	1:100,000	Road Overlay	SO			X		
Surface (Recreation)	1:100,000	4920	1:100,000	Rec. Symbols	SO	X				
Surface (Mineral)	1:100,000	4920			DSC					

Map Type	Scale	Funding	Modifications		Production/Purchase Source	Modification Source				
			Scale	Features		SO	DO	RA	DSC	Other
IDAHO										
Planimetric (MLR)	1" & 1/2", 30' Quad	4920			SO					
Surface/Minerals	1:100,000	4920			DSC					
MLR, lands & Realty, Cadastral	1:24,000	4210, 4500, etc.			USGS					
Thematic (Wilderness, Range, EIS)	Various Scales	4322, 4332			SO					
NEW MEXICO										
Color Quad	1/2"=1 mile	4920		Status, etc.	SO	X				
Multi-Purpose	1:100,000	??		Admin., Status, etc.	USGS, DSC, SO	X				X
Multi-Purpose	1:500,000	4920		Admin., Status	SO	X				
Multi-Purpose	1:1,000,000	4920		Admin., Status	SO	X				
Ortho Photo (Multi-purpose)	7 1/2 minute	Several Codes								
Wilderness Maps	1/2"=1 mile	4332		Admin., Status	SO	X				
CALIFORNIA										
California State Map (BLM) (Range, Forestry, Fire, Recreation)	1:750,000									
Photo reproduction work		4322, 4310, 4360, 4333			Private Contract					

Map Type	Scale	Funding	Scale	Modifications Features	Production/Purchase Source	Modification Source			
						SO	DO	RA	DSC
CALIFORNIA (Continued)									
California State Map	1:500,000	4322, 4310, 4360, 4333			USGS				
Topo Quads	1:100,000	4322, 4310, 4333, 4520			USGS				
CDCA-ORV Mgmt.*	1/2"=1 mile	4333	1/2"=1 mile		SO	X			
Surface & Mineral Mgmt. (Public Domain)	1:100,000	4920			DSC				
Topo Quads	1:250,000	4322, 4310, 4360, 4333, 4520			USGS				
Topo Quads	15 minute	4322, 4310, 4360, 4333, 4520			USGS				
Topo Quads	7 1/2 minute	4322, 4310, 4360, 4333, 4520			USGS				

*No charge to the public.

Bureauwide Mapping Study
Questionnaire A
Summary of Responses

Planning & Budget

--92% of respondents have a system to help identify the type and volume of maps produced by individual employees.

--70% of SO feel that there is a central clearinghouse/coordinator point for all mapping planning and production. 30% provided a negative response.

--What is the mechanism for determining the volume of maps ordered or produced by:

--USGS - SO usually keep a predetermined amount of Quads for internal use. USGS also furnishes set quantities of maps (Orthophotos, DEMS, IR Aerial Photos) through cooperative agreements.

Funding availability was also identified as a determinate of volume of maps to be ordered or produced. The ESO determines volume through A-16 requests.

--DSC - Dictated by sales and use, telephone requests, AWP, availability of funds and space.

--SO - Governed by FTE and funding, AWP, Administration/internal use and public sale.

--Other - USF&W (Digital Resource Data) ordered through cooperative agreement (Wyoming).

83% of SO respondents felt that mapping products produced in the state will be paid by benefitting activities (FY 83). 17% of the states (Montana, New Mexico, DSC) identified a negative response to this question.

Refer to Enclosure 6 for visual comparison of estimated activity contribution for map production - FY 83.

The lack of response from 4 states (Arizona, Montana, New Mexico, and California) may be indicative of problems faced in developing or identifying a "Mapping Program" within the SO/Bureau.

If all Bureau activities (directly or indirectly) utilize certain map products should they in turn pay a proportionate share of costs incurred for product cost (End Product and/or Developmental Costs - depending on type of map)? Or should a separate activity or subactivity be developed to provide a standard map product for use by all activities? No consensus of opinion on scale size, or degree and amount of detail will ever be reached.

It may be safe to assume that the Bureau's mapping efforts are generally funded by the major benefitting activities (Map production initiator and by minor activities who have available funding.)

As long as this situation continues to exist, the Bureau cannot claim to have a Mapping Program per se but rather individual Programs/Activities are duplicating mapping support activities in each state, for their respective programs. This duplication is inefficient and costly.

75% of field offices feel they will have sufficient funding for all mapping personnel (ESO, Oregon, Wyoming, Utah, Colorado, Montana, Nevada, California, Alaska). 17% of field offices anticipate a shortfall (New Mexico - 5 WM short, Idaho - 10 WM short, DSC - ??). 8% did not respond (Arizona - Unknown).

62% of respondents felt that there was not clear instruction from the WO level regarding funding and source of mapping production.

38% felt there was clear instruction.

Negative comments tend to indicate that goals, direction and guidance for a Bureauwide Mapping Program are lacking.

Each state has varying policies regarding sales, pricing and availability of maps. This indicates a lack of any Bureauwide policy. Some maps are provided to the public free of charge, while other maps are inconsistent in their availability and price. (Refer to Enclosure 7.) The Arizona State Office submitted specific examples of price variances between State Offices (Refer to Enclosure 7A).

Aerial photography map product sales pricing and availability, varies among states. Some states refer all aerial photography question to DSC. Other states refer inquiries to affiliate NCIC Offices. There were also some inadequate responses from certain states. (Refer to Enclosure 8.)

All SO have some means of conveying information regarding available map products (i.e., Indexes, Listings, Reports, PAWP, AWP, On-The-Job Training, Orientation Training Courses). DSC felt they had no method for information dissemination except for a few map indices. (Refer to Enclosure 9.) Although at Cartography meetings in February, states pushed for WO directive from WO budget regarding inter-office agreements within BLM, particularly for digital work.

75% of respondents did not feel that currently produced maps should be produced at another level. This negative response for change does not, however, identify the extent of variance regarding each state's current level of map production capability at various organization levels. Some states felt that additional map producing capability could be performed/clarified for DOs, SOs and DSC. (Refer to Enclosure 10.)

A statement was made regarding the production of 7.5 minute topos by USGS. It was felt that this was a BLM responsibility.

There were no respondents who felt that any currently BLM produced maps should/could be produced by other agencies. 75% of respondents responded in the negative, 25% of respondents (Arizona, California, ESO) either made no comment or had no comment.

There was a 50-50 split regarding whether there are map products not currently available to the Bureau which should be produced by the Bureau (Refer to

Enclosure 11.)). Variety of responses may be indicative of current state-of-the art available to individual states.

31% of respondents identified DSC as their sole source in meeting photogrammetric needs. 54% of respondents identified a combination of sources (in-house, DSC, contract) to meet their photogrammetric needs. Only 15% (California and Alaska) provided no comment or did not specifically identify DSC as a source of photogrammetric support. (DSC utilizes a combination of sources to meet photogrammetric needs.)

69% of field responses (excluding DSC) identified both in-house and DSC capability to meet photolab needs. 31% (Nevada, Montana, California, Alaska) identified in-house capability as their sole source of meeting photolab needs. (Note: in-house capability includes contracting for services.)

Please refer to Personnel section, Enclosure 2, for a list of Remote Sensing personnel.

50% of field offices request technical assistance from the aerial photography staff at DSC for contracts under \$10,000. 42% do not request assistance. 8% (Montana) unable to provide a response. (Functional responsibility is located in Resources due to location of Remote Sensing personnel.)

67% of field offices request technical assistance from the aerial photography staff at DSC for contracts over \$10,000. 25% do not request assistance (Alaska, ESO, Wyoming). 8% (Montana) unable to provide response.

Field response would indicate a continued need for DSC support in this area.

75% of respondents have a consensus of opinion regarding the automation and increased computerization of cartographic services.

17% no comment or response. One state (Idaho) did not feel the map production methods would change (8%).

When asked if this would change their type of map production, 58% felt it would; 25% felt it would not; and 16% did not know or made no comment.

ESTIMATED ACTIVITY CONTRIBUTION FOR
MAP PRODUCTION - FY 83

	4111	4112	4114	4132	4212	4211	4213	4310	4322	4331	4332	4333	4340	4350	4410	4420	4430	4440	4510	4520	4713	4800	4920	6310	6330	6340	6410	MISC	NOTES
STATE	4111	4112	4114	4132	4212	4211	4213	4310	4322	4331	4332	4333	4340	4350	4410	4420	4430	4440	4510	4520	4713	4800	4920	6310	6330	6340	6410	MISC	NOTES
UT	6	11	11	--	7	--	5	--	13	2	4	4	9	2	--	5	2	--	5	--	5	2	7	--	--	--	--	--	
CO	5	15	5	--	10	6	--	5	--	5	--	3	--	3	--	15	--	--	--	8	--	--	25	--	--	--	--	3	
WY	10	7.6	--	--	1.9	--	--	.6	23.9	.6	1.9	1.3	2.5	2.5	--	2.5	--	--	--	--	--	12.6	22	--	--	--	--	--	Does not include 66 WMs to draft MTPA use plats.
OR	--	--	--	--	--	--	--	2	11	--	2	--	2	--	--	--	--	--	--	--	--	1	--	77	1	2	2	--	
AZ	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Benefitting activities who can afford to pay for maps do. Those who can't don't.
MT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	No answer. Negative response to question 7.
AK	7	--	--	--	--	48	--	--	--	--	--	--	--	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	
ID	--	--	--	--	--	--	--	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26 other subactivities average 1.9%? Not listed.
NM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	No answer. Negative response to question 7.
CA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	No response??
ES0	50	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
DSC	4.4	6.3	4.0	4.5	6.2	9.5	8.7	5.4	6.9	7.4	7.2	4.2	3.7	5.1	5.2	3.9	3.9	--	--	3.5	--	--	--	--	--	--	--	--	Proportionate share for 1:100K base map production.
NV	--	--	--	--	--	--	--	--	--	--	30	--	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Questionnaire A
Interim Summary

Question: (10.) What is the State policy regarding mapping product sales such as recreation maps, minerals maps, etc., with regard to pricing and availability.

Utah Carto sales handled through Public Room Prices set in accordance to Cost of Production (not all costs recovered), Copy Fee Schedule - Division of Administration.

Colorado 1:100, 1:500, same as USGS. Other maps same as other SOs. Prices determined by Board Meeting/Printing, Production costs.

Wyoming National BLM/Interior prices used for 100k and 500k, "Color" quads and recourse maps charges cover printing, distribution, maintenance. Reimbursed (4920) funds used for reprinting, maintenance, storage.

Oregon Recreation maps (folded) - Free. Remaining maps - sold at various prices.

Arizona Public comments are derogatory regarding price differences between states. Prices determined by costs (materials, machine maintenance, mail. Prices should be compared with other states, take average (WAG method).

Montana \$1.00 - Recreation Maps.
\$3.00 - Minerals Management Quads.
Monies placed in 4920 accounts - Reused in Map Program. Sold by Public Affairs.

Alaska Sale of Records - Copy Fee Account.

Idaho 1:100k surface and minerals management maps are \$3.25. All planimetric and Diazo type maps are based on square footage.

New Mexico All available maps have a set price.

California Do not have a variety of maps surface and minerals management - \$3.25. California State maps (1:750,000) - \$5.00. Off-Road Vehicle (Desert District only) - Free. District maps also given on request.

ESO FMMMP maps sold for \$2.00; this is the only map available upon request.

DSC DSC does not sell, distribute or store any map products although consideration should be given to storage of map reproducibles at DSC. (Question: Doesn't USGS store 1:100k maps for BLM??)

Nevada Price list generated by SO and distributed to field offices. Copy fee structure also developed by photolab.

BUREAU OF LAND MANAGEMENT (USDI)
2400 Valley Bank Center
Phoenix, Arizona 85073

September 1, 1982
Date

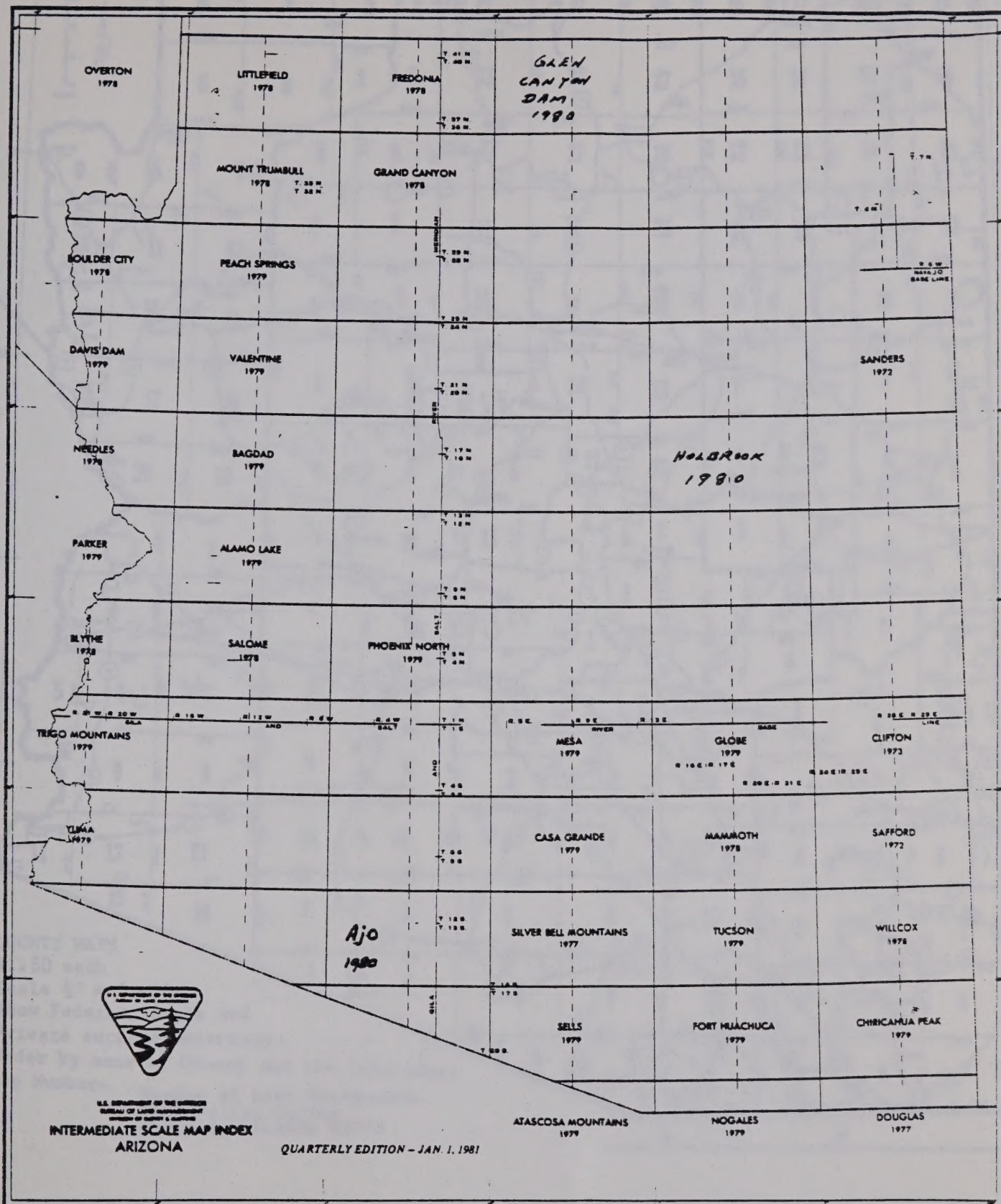
MAP PRICE LIST

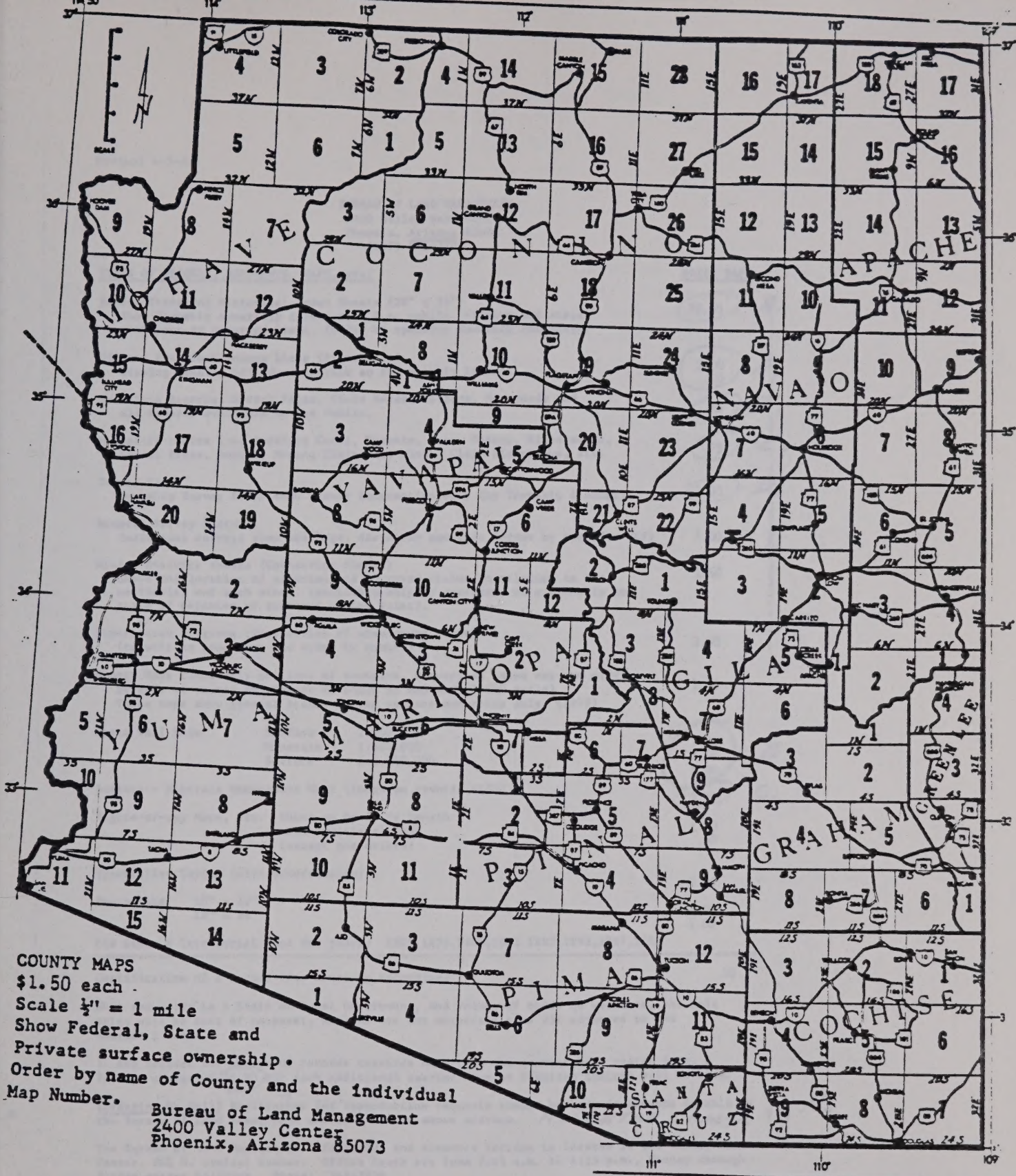
1. State of Arizona Map, multi-color, shows public and private land, National Forests, Parks & Monuments, Indian & Military Reservations, National Wildlife Refuges, roads, rivers and county boundaries, with township and range designations; Scale, 1:500,000 (1 inch equals 8 miles); Size 4' x 5' \$7.00 B.
Same Map, 1:1,000,000 (1 inch equals 16 miles); Size 24½" x 28" 5.00
2. Township Status Plats, show land ownership - state, private, public. Patent numbers and reservations noted; Size 20" x 25" (1 inch equals ½ mile), must be ordered by township and range, two types available:
 - a. Master Title Plat - Information as above, Historical Index on Plats which lists all transactions 3.00 A.
 - b. Mineral Plats - Oil & gas, geothermal--must be ordered by specific mineral, show ownership of minerals and existing leases on these 3.00
3. Survey Plats - Show details of cadastral surveys 1.50 D.
Existing Field Notes on these surveys--cost per page25 I.
4. Serial Register Sheets, Patents, Executive Orders, etc.,
from microfilm (per page). .75 E.
Xerox copies (per page). .25
5. Administrative Maps - Arizona, Black-White, (1 inch equals 1 mile) show roads, physical features, drainage pattern, approximately 5 townships, 6 ranges 3.50
6. Intermediate Scale Maps - Multi-color, scale 1:100,000, showing Surface only and Surface and Mineral ownership. Maps in process of development--coverage limited (index attached) 3.25 C.
7. County Maps - Show Federal, State and Private surface ownership, black & white, (½" - 1 mile), Order by name of County and individual map number 1.50
8. Other:
 - a. Topographical Maps - Inquire at U.S. Geological Survey, USDI, Denver Federal Center, Building 41, Denver, Colorado 80225.

b. County Maps - Inquire at Arizona Highway Department, 206 S. 17th Ave., Phoenix, Arizona 85007.

c. Forest Maps - U.S. Forest Service, USDA, Region 3, 517 Gold Avenue, S.W., Albuquerque, New Mexico 87102.

d. Aerial Photographs - Western Laboratory, Aerial Photography Division, U.S. Department of Agriculture, Agricultural Stabilization & Conservation Service, 2505 Parley's Way, Salt Lake City, Utah 84109.





Enclosure 7a-4

BUREAU OF LAND MANAGEMENT
2400 Valley Bank Center
Phoenix, Arizona 85073
(602) 261-3706

TYPES OF RECORDS, DOCUMENTS, MAPS, etc.		PRICE EACH	
Status Plats and Historical Index Sheets (20" x 24") Show Township ownership information i.e. public, private and state, withdrawn or reserved lands. (order by specific Township and Range)		\$2.00	A.
Oil and Gas Simultaneous Lists (Bi-monthly) Drawing Results (if you subscribe to the monthly lists)		2.00 .50	F.
Case-type Records, Serial Pages, Field Notes, Letters, Memoranda and all Records available to the Public.		.35	I.
Microfilm copies i.e. Aperture Cards, Patents, Exec. Orders, Withdrawals, Serial Pages, Orders, Mining Claims and Mining Claim Microfiche, etc.		.75	E.
Survey Plats Township Survey Plats show survey information only (by Township & Range)		1.50	D.
Mineral Survey Plats Individual surveys show bearings, distances and ties (order by specific MS#)		1.50	
Mining District Sheets (Connecting Sheets) Shows the location of patented and surveyed claims in relation to the section(s) and each other. (available only by quadrant of a township and range if patented or surveyed claims exist).		1.50	
Protraction Diagrams (Protraction of unsurveyed areas) (request an index map and order by number)		3.00	
County Maps (Show only portions of counties, request an index map and order by name of county and number as shown on map index) (1/4" scale) These maps show general status of the surface ownership only. (1979)		1.50	
State Wall Maps	Surface 1:500,000 Minerals 1:500,000 Surface 1:1,000,000	7.00 7.00 5.00	B.
Surface - Minerals Management Maps (Index on reverse side)		3.25	C.
Rights-of-way Maps, etc. Sheet up to 3' in length each additional foot (except photostats)		1.50 .50	
Typewritten Copies (with proofreading)		2.00	
Photostats 10" x 12" 18" x 24"		3.00 4.00	
Old State & Territorial Maps for years: 1869,1876,1880,1883,1887,1892,1897,1912			
Certification of a record (for court or recording)		.50	

When requester is a State or Local Government, and volume of order so warrants, the unit price will be cost of manpower, machine use and materials plus 25% adjusted to the nearest 5 cents.

If the request for copies of records requires more than one quarter hour search time, a further charge of \$1.00 for each additional quarter hour or fraction thereof will be made.

(Ordering by Mail) Remittances for reproduction requests should be made in advance payable to the Bureau of Land Management and sent to the above address. *No EXTRA Charge*

The Bureau of Land Management Information and Accounts Section is located in the Valley Bank Center, 201 N. Central Avenue. Office hours are from 7:45 a.m. to 4:15 p.m., Monday through Friday except holidays. Phone: 261-3706

BUREAU OF LAND MANAGEMENT (USDI)
P. O. Box 1449
Santa Fe, New Mexico 87501

MAP PRICE LIST

1. State of New Mexico Map, multi-color, shows public and private land, National Forests, Parks & Monuments, Indian & Military Reservations, National Wildlife Refuges, roads, rivers and county boundaries, with township and range designations; Scale, 1:500,000 (1 inch equals 8 miles); Size 4' X 5' \$ 3.50
Same Map, 1:1,000,000 (1 inch equals 16 miles); Size 24½" X 28" 2.50 *B.*
 2. New Mexico Public Land Recreation Map, multi-color, scale 1:1,000,000 with detailed enlargements of developed recreation areas managed by BLM. Same as above. Contains information about the public lands and their resources..... \$ 1.00
 3. State of Oklahoma Map, Black-White, showing land features, roads, towns, townships and ranges, scale 1:500,000 (1 inch equals 8 miles)..... \$ 2.50
 4. Township Status Plats, Black-White, New Mexico, Oklahoma and Texas (acquired lands only in Texas), show land ownership - state, private, public. Patent numbers and reservations noted; now ownership names shown; Size 20"X25" (1 inch equals ½ mile), must be ordered by township and range, three types available:
 - a. Master Title Plat - Information as above, Historical Index on Plats which lists all transactions..... \$ 2.00 *A.*
 - b. Mineral Plats - Oil & gas, geothermal, coal, potash, uranium--must be ordered by specific mineral, show ownership of minerals and existing leases on these..... \$ 2.00
 - c. Survey Plats - Show details of cadastral surveys existing Field Notes on these surveys.....cost per page (minimum 50¢) \$.25 *D.I.*
 4. Serial Register Sheets, Patents, Executive Orders, etc. (New Mexico, Oklahoma, Texas), from microfilm..... (per page) \$.50
Xerox copies..... (per page) \$.25 *E.*
(Minimum charge of 50¢)
- NOTE: If the requests for copies of records requires more than one quarter hour search time, a further charge of \$2.50 for each additional quarter hour or fraction thereof shall be made. *G.*
6. Administrative Maps - New Mexico, Black-White, (1 inch equals 1 mile) show roads, physical features, drainage pattern, approximately 5 townships, 6 ranges..... \$ 1.50

Planning Unit Maps - New Mexico, Black-White, (1 inch equals 1 mile)
same as above, but on a BLM Planning Unit rather than 5 X 6 township/range,
Cost varies between \$1.50 and \$2.50 each, but the cost per foot is..... \$.50

(Grazing allotment boundaries available for some areas for both type maps;
public land designated; index available on request.)

7. Color Quad Maps - New Mexico, multi-color, 5 townships, 6 ranges;
scale $\frac{1}{4}$ " equals 1 mile; size - 15" X 21", available in SURFACE ownership..... \$ 1.50
SURFACE/MINERALS (minerals overlay on Surface Map)..... \$ 2.00
(Index on next page)

8. Intermediate Scale Maps - Multi-color, scale 1:100,000, showing Surface
and Mineral ownership. Maps in process of development--coverage limited for
Oklahoma and New Mexico..... \$ 2.00 C.

9. Simultaneous Oil & Gas bi-monthly List Available for Leasing (New Mexico,
Oklahoma and Texas)..... \$ 4.00 F.
Drawing Results List..... \$ 4.00
(Accounts may be opened for a minimum of \$25.00)

10. Aerial Photographs - Prints of aerial photographs made between 1936 and
1952 at various scales may be ordered from: National Archives, Room 2-W,
Washington, D. C. Photos made after 1953 are available from BLM, Denver
Service Center, Building 50, Denver Federal Center, Denver, Colorado 80225.
Not all areas are covered with photos. You should contact either of the
offices listed to determine what is available. You will need to furnish
the location of the photos needed by state and county, dates of coverage
desired and scale of photos desired. Prices vary for prints so you should
make the contacts first before sending any money.

Many other agencies of the federal government also make aerial photos in
addition to the BLM. These include U. S. Forest Service, Agriculture
Stabilization & Conservation Service, Soil Conservation Service, Geological
Survey, Water & Power Resources Service and the Department of Defense.

11. Other:

Topographical Maps - Inquire at U. S. Geological Survey, USDI, Denver
Federal Center, Building 41, Denver, Colorado 80225.

County Maps - Inquire at New Mexico Highway Department, P. O. Box 1149,
Santa Fe, New Mexico 87501.

Road Maps - Inquire at New Mexico Travel Division, Commerce & Industry
Department, Bataan Memorial Building, Santa Fe, New Mexico 87503.

Forest Maps - U. S. Forest Service, USDA, Region 3, 517 Gold Avenue,
S. W., Albuquerque, New Mexico 87102.

United States of America Land Status Maps - (showing extent of Public
Land Surveys, Remaining Public Land, Historical Boundaries, National
Forests, Parks, Monuments, Indian Reservations, Wildlife Refuges)

1. Section Map, Scale 1:3,168,000, approx. 64"x40",
1 inch equals 50 miles..... \$ 1.50
2. Section Map, Scale 1:2,500,000, approx. 42"x52",
1 inch equals 40 miles..... EAST HALF..... \$ 1.50
WEST HALF..... \$ 1.50

COLOR QUADRANGLE NAMES

NO.	NAME	NO.	NAME	NO.	NAME	NO.	NAME
NW-1	Shiprock	NW-28	Mesa de Oro	SW-16	Cliff	SE-6	Carrizozo
NW-2	Farmington	NW-29	Belen	SW-17	Fort Bayard	SE-7	Arabelo North
NW-3	Navajo Dam	NW-30	Mountainair	SW-18	Cabelle	SE-8	Railroad Mountain
NW-4	Lumberton	NE-1	Questa	SW-19	Elephant Butte	SE-9	Elida
NW-5	Tres Piedras	NE-6	Taos	SW-20	White Sands	SE-10	Dora
NW-7	Blanco Trading Post	NE-11	Mora	SW-21	Lordsburg	SE-11	Ruidoso
NW-8	Nageezi	NE-16	Pecos	SW-22	Hurley	SE-12	Picacho
NW-9	Lindrieth	NE-18	Conchas Dam	SW-23	Lake Valley	SE-13	Roswell
NW-10	El Rito	NE-21	Clines Corners	SW-24	Hatch	SE-14	Caprock
NW-12	Pueblo Bonito	NE-26	Encino	SW-25	Orogrande	SE-15	Tatum
NW-13	Pueblo Pintado	NE-27	Vaughn	SW-26	Animas	SE-16	Alamogordo
NW-14	Cuba	NE-28	Alamogordo Dam	SW-27	Hachita	SE-17	Elk
NW-15	Espanola	SW-1	Quemado	SW-28	Deming	SE-18	Artesia
NW-16	Gallup	SW-2	Pie Town	SW-29	Las Cruces	SE-19	Maljamar
NW-17	Crownpoint	SW-3	Magdalena	SW-30	Anthony	SE-20	Lovington
NW-18	Ignacio Chavez	SW-4	Socorro	SW-31	Rodeo	SE-21	Prather
NW-19	Jemez	SW-5	Gran Quivira	SW-32	Apache Hills	SE-22	Pinon
NW-20	Santa Fe	SW-7	Old Horse Springs	SW-33	Columbus	SE-23	Carlsbad West
NW-21	Ramah	SW-8	San Mateo Mountains	SW-34	Strauss	SE-24	Carlsbad East
NW-22	Grants	SW-9	San Antonio	SW-35	Anapra	SE-25	Hobbs
NW-23	Cubero	SW-10	Bingham	SW-36	San Luis Mountains	SE-26	Alamo Mountain
NW-24	Albuquerque	SW-12	Gila Cliff Dwellings	SW-37	Alamo Hueco Mountains	SE-27	White City West
NW-25	Moriarty	SW-13	Monticello	SE-1	Corona	SE-28	White City
NW-26	Fence Lake	SW-14	Elephant Butte North	SE-2	Ramon	SE-29	Loving
NW-27	Cebollita Peak	SW-15	Three Rivers	SE-3	Yeso	SE-30	Jal

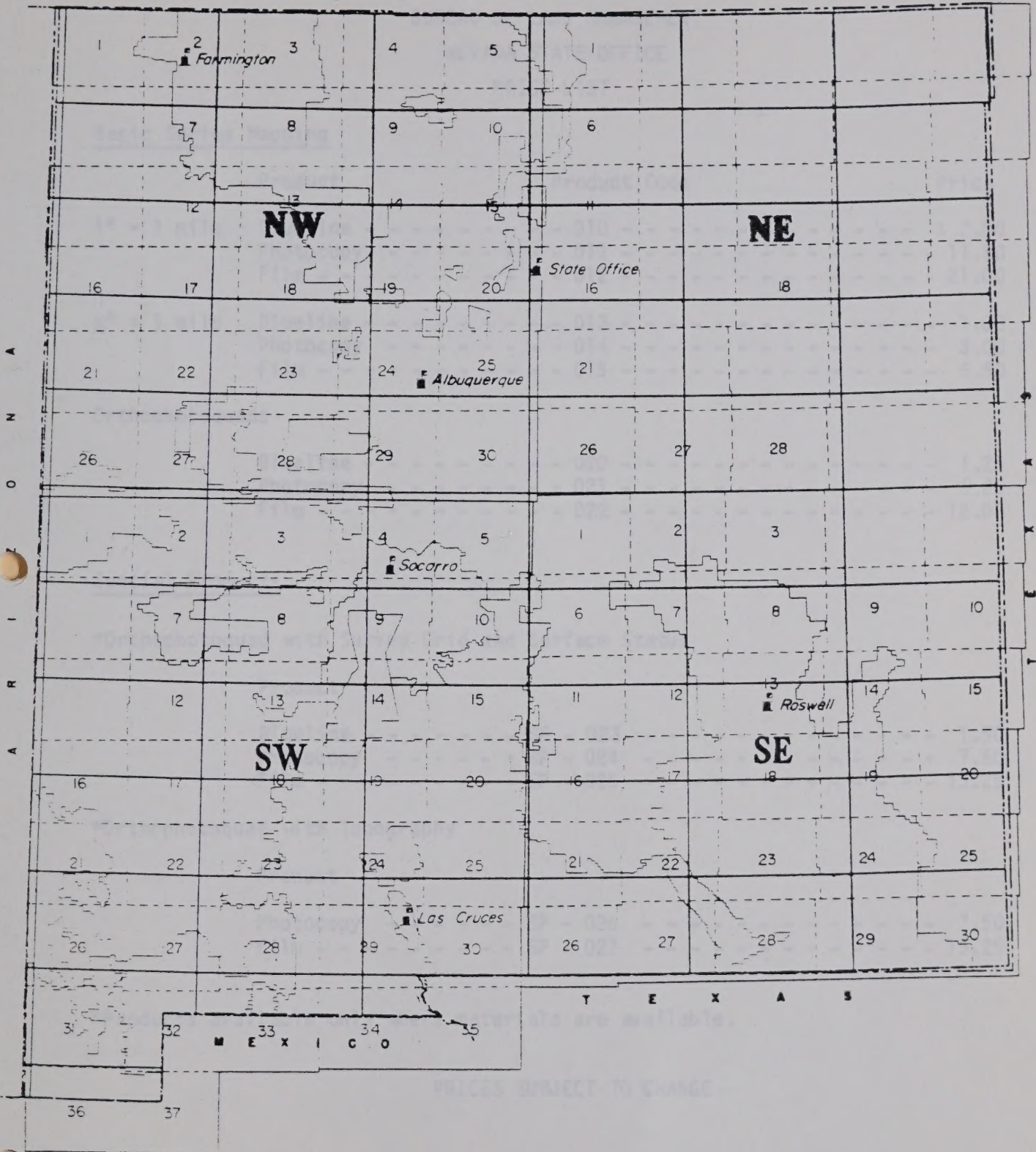
13

= Color Quadrangle - Item 7

= Intermediate Scale - Item 8

If you desire intermediate scale,
place an X in appropriate area on
map - next page.

C O L O R A D O



BUREAU OF LAND MANAGEMENT
NEVADA STATE OFFICE
PRICE LIST

Basic Series Mapping

	Product	Product Code	Price
1" = 1 mile	Blueline - - - - -	010 - - - - -	\$ 2.00
	Photocopy - - - - -	011 - - - - -	11.50
	Film - - - - -	012 - - - - -	21.00
½" = 1 mile	Blueline - - - - -	013 - - - - -	1.00
	Photocopy - - - - -	014 - - - - -	3.00
	Film - - - - -	015 - - - - -	5.50

Orthophotoquads

Blueline - - - - -	020 - - - - -	1.25
Photocopy - - - - -	021 - - - - -	6.25
Film - - - - -	022 - - - - -	12.00

Special Products*Orthophotoquad with Survey Grid and Surface Status

Product

Blueline - - - - -	SP - 023 - - - - -	1.50
Photocopy - - - - -	SP - 024 - - - - -	7.50
Film - - - - -	SP - 025 - - - - -	13.25

*Orthophotoquad with Topography

Product

Photocopy - - - - -	SP - 026 - - - - -	7.50
Film - - - - -	SP - 027 - - - - -	13.25

*Products available only where materials are available.

PRICES SUBJECT TO CHANGE

Effective July 1, 1982

Schedule of Fees for Copies of Records

<u>Type of Record or Service</u>	<u>Reproduction Process</u>	<u>Unit</u>	<u>Charge</u>
1. Materials stocked for official use but not for gratuitous distribution. (Includes handbooks, directives study reports, etc.). Excludes printed matter for sale by the Superintendent of Documents.	Office Copiers	Sheet (a)	\$.25
	Other than Office Copiers	Sheet	1.00
2. Other paper records. (Includes case-type records, patents, serial pages, field notes, survey plats, land status and use records, and all other records available to the public).	Field Notes	Sheet	.50
	Office Copiers	Sheet	.25
	Other than Office Copiers	Sheet	1.00
3. List of parcels available for simultaneous oil and gas filings and list showing results of simultaneous oil and gas drawings.	Office Copier	Results List	1.00
		Availability List	3.00
4. Maps	Printed Copies	30' Quads (1"=1 mile)	2.00
		30' Quads (1/2"=1 mile)	1.00
		Mineral/Surface Mgmt	3.25
5. Paper copies from microfilm - Itek 1824 - under 12" - over 12" - Recordak - 3M Reader-Printer - 500 Reader-Printer	Office Copier	Sheet	1.00
		Sheet	2.00
		Sheet	.50
		Sheet	1.00
		Sheet	.50
6. Microfiche Aperture cards	Film Film/Card Dupl.	Each	1.00
		Each	.50
7. Microfilm rolls	Film Dupl.	16mm	16.00
		35mm	25.00
		105mm	45.00
8. Typewriter copies (with proofreading).	Typewriter	Sheet	\$ 2.00
9. ADP printout or tape	ADP	Sheet	.25
		Tape	45.00
10. Certification	-	Each	.25
11. Mylars	Film	30' Quads (1"=1 mile)	20.00
		30' Quads (1/2"=1 mile)	10.00
		Land Status Plats	6.50
12. Search Time	Clerical Personnel	% hour	1.50
	Non-Clerical Personnel	% hour	3.00

E.I

A.
D.

F.

C.

G.

COPY FEE SCHEDULE

of BLM Land Records for Oregon and Washington states

BLM land records are available for public inspection and copies may be purchased from 9:30 a.m. to 3:30 p.m., Monday through Friday, except for federal holidays or when closed by administrative order. Our office is located at

Telephone requests for record copies or land status are not possible or practical with our limited staff. If unable to visit our office, please mail your request to the Bureau of Land Management, Land Status Records, P.O. Box 2965, Portland, OR 97208.

Regulations require payment of all orders in advance. Make your check, bank draft or money order payable to the Bureau of Land Management.

Status Documents

Paper copy price

Film duplicate price

Title	Identified by:	8 1/2" x 11"	8 1/2" x 14"	18" x 24"	aperture card	microfiche	roll film
Master Title Plat, Historical Index, Geothermal Plat, Leaseable Mineral Plat (for oil & gas)	township & range		<i>A.</i>	<u>\$2.00/plat</u>	\$1.00/card		write for quote
Tract Book page	township, range & section			\$2.00/page			
Patents, Deeds to US, Withdrawal Orders and other recorded documents supporting the land status records	township, range & section & legal subdivision		\$1.00/page		\$1.00/card		
Cadastral Survey Plat	township, range & date		<i>D.</i>	<u>\$2.00/plat</u>	\$1.00/card		
Mineral Survey Plat	survey number, claim name	<u>\$1.00/page</u>	<i>I.</i>	<u>\$2.00/plat</u>	\$1.00/card	write for quote	
Oregon Field Notes	township, range & section	<u>\$1.00/page</u>					
Washington Field Notes	case file number	<u>\$1.00/page</u>	<i>E.</i>				
Serial Register Page	case file number, document	<u>\$1.00/page</u>					
Case file documents	case file number, document	<u>\$1.00/page</u>					
Mining claim case file documents	case file number, document	<u>\$1.00/page</u>					
Mining claim case file map	case file number, claim name	<u>\$1.00/page</u>					
Mining claim index (data organized by claim name, claimant's name, geographical description or BLM serial number)	specify format(s)	<u>\$1.00/page</u>					

Simultaneous Oil & Gas Drawings*

- List of Available Land \$4.00
- List of Winners \$2.00

*Because of relatively low levels of oil and gas leasing in Oregon and Washington in the past, simultaneous drawings have been infrequent. Recent increased interest in oil and gas leasing suggests this will change. For automatic notification of lands available, a Simultaneous Listing account may be opened for \$25. The cost for listings are deducted when mailed and the account balance shown on your receipt. When no lands are available the notification charge is only \$1.

Other Services -

Record Certification: \$1.00 per document. The document and statement of certification are riveted to a blue stock backing and impressed with the Bureau's embossed seal. Record Searches: Research that requires more than one-quarter hour will be charged \$1.50 per additional quarter-hour for clerical staff and \$2.50 for non-clerical staff. All requests are worked on a time-available, first-come-first-served basis. G.

Copy Fee Accounts: When large or frequent requests for record copies are anticipated, a copy fee account can be established with a \$25 minimum deposit. Time otherwise lost while determining copy costs and the expense of additional correspondence or telephone calls would then be eliminated.

Mail Tubes: Orders are mailed in regular business envelopes which may require folding record copies or maps. If you wish your order to be sent by priority mail in a tube, an additional \$3 is charged to cover the cost of mailing tubes and extra handling. H.

NOTICE !!! PRICE INCREASE

EFFECTIVE NOV. 25TH 1981
PRICES OF U.S.G.S. MAP
PRODUCTS WILL INCREASE
AS FOLLOWS :

	Old	New
Topographic Maps	1.25	2.00
Orthophoto Maps	1.25	2.00
Historical Maps	1.25	2.00
Land-use and Associated Maps	2.25	3.25
County Maps	2.25	3.25
1:100,000 Scale Maps	2.25	3.25
Flight Line Diagrams	1.00	2.00

PRICE INCREASE

EFFECTIVE NOV. 25TH 1981
 PRICES OF U.S.G.S. MAP
 PRODUCTS WILL INCREASE
 AS FOLLOWS :

Old	1.50	Topographic Maps
3.00	1.50	Orthographic Maps
2.00	1.50	Historical Maps
3.00	2.50	Land-use and Associated Maps
3.00	2.50	County Maps
3.00	2.50	1:100,000 Scale Maps
2.00	1.00	Flight Line Diagrams

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
BOX 25286, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

MAPS, BY SERIES NAME OR SCALE

Standard Topo Quads (1:24,000; 1:25,000; 1:62,500; 1:63,360)*	\$2.00
Orthophotomaps	2.00
Orthophotoquads	2.00
1:50,000 Topographic Quadrangles (DMA)	2.00
1:25,000 (7 1/2' x 15') Metric Topographic Quadrangles	3.25
1:100,000 Maps (Including BLM Surface/Mineral Mngt.)	3.25
1:125,000 Maps	3.25
1:250,000 Maps (Including Alaska Boundary Series)	3.25
County Maps (1:50,000 & 1:100,000)	3.25
State Base (No Contours—1:500,000 & 1:1,000,000)	2.50
State Base (Topographic & Relief—1:500,000)	3.25
International Maps of the World (1:1,000,000)	3.25
National Park Maps	3.25
Pacific Coastal Ecological Inventory Maps	2.50
National Atlas Separates	5.00
Geodetic Control Diagrams	1.75
Alaska Map A	(set) 5.00
Alaska Map B (Base)	(set) 6.50
Alaska Map B (Contour)	0.50
Alaska Map C	3.25
Alaska Map E (Base)	3.25
Alaska Map E (Relief)	5.00
U.S. Maps 2-A & 2-B	2.50
U.S. Map 3-A	3.25
U.S. Map 3-B	2.00
U.S. Maps 5-A; 5-B; 5-D	3.25
U.S. Map 6-A	2.00
U.S. Maps 7-A; 7-B; 7-C	2.50
U.S. Map 10-A	1.00
U.S. Map 11-A	0.50
U.S. Map 16-A	

NOTE:

*Includes New Maps, Revisions (Standard and Interim)
and Reprints

SPECIAL MAPS AS FOLLOWS

Alaska Federal Conservation Maps	3.25
Arizona Sepia Mosaic	3.00
Arizona Black & White Mosaic	2.00

SPECIAL MAPS—Continued

Dry Fork Cheyenne River WY-CO Color Image	\$3.25
Medicine Bow River WY-CO Color Image	3.25
Mt. St. Helens & Vic. (Post Eruption)	1.00
Phoenix Sepia Mosaic	3.25
Pumpkin Creek, Mt. Color Image	3.25
United States, Conterminous, Black & White, Band 5	3.25
United States, Conterminous, Black & White, Band 7	3.25
Wenatchee, WA	3.25

THEMATIC MAPS

Basement Rock Map of North America	1.25
Basement Rock Map of U.S.	(set) 5.00
Bouguer Gravity Anomaly Map of the U.S.	1.50
Coal Fields of Alaska	3.00
Coal Fields of the U.S.	3.50
Geologic Map of North America	(set) 8.00
Geologic Map of (State)	6.00 for 1st sheet; 4.00 per add. sheet
Geologic Map of the U.S.	(set) 8.00
Hydrologic Unit Map of (State)	from 2.00 to 6.00
Tectonic Map of North America	(set) 8.00
World Seismicity Map	2.50

Prices for other Thematic Maps varies. Please check with your Distribution Center or Public Inquiries Office for individual map prices

A's Antarctic Geologic Maps
C's Coal Investigations
GP's Geophysical Investigations
GQ's Geologic Quadrangles
HA's Hydrologic Investigations
I's Miscellaneous Investigations
L's Land Use/Land Cover Series
MF's Miscellaneous Field Studies
MR's Mineral Investigations Resource
OC's Oil & Gas Investigations Charts
OM's Oil & Gas Investigations Maps

Enclosure 7a-14

* PLEASE READ CAREFULLY *

ARIZONA DEPARTMENT OF TRANSPORTATION

GENERAL HIGHWAY MAP BROCHURE

APRIL 1, 1982 THRU DECEMBER 31, 1982

*SIMILAR
COMPARISON*

ROAD SYSTEM MAPS

ATLAS MAPS

GENERAL SHEET COVERAGE

See Map on Page 2

SCALE: $\frac{1}{2}$ " = 1 mile SIZE: 18" x 23"

PRICE per sheet: \$2.00

ENLARGED SUPPLEMENTAL SHEETS

Emphasize the Metropolitan Areas

See listing on Page 3

SCALE: 1" = 1000' or 1" = 2000'

SIZE: 18" x 23" PRICE per sheet: \$2.00

These maps show Townships, Ranges and Section Lines and Numbers, Trails, Mines, Springs and many more geographical features. Multi-color Lithograph.

COUNTY MAPS

1 - Sheet Coverage

SCALE: $1\frac{1}{4}$ " = 5 miles

PRICE: \$2.00 each

See List on page 4

STATE WALL MAP

Multi-Color Lithograph

SCALE: 1" = 8 miles SIZE: 47" x 54"

PRICE each: \$8.00 *B.*

Wall Map - Excellent for framing
(also in $\frac{1}{2}$ size in Black and White - \$2.00)

This map shows Longitude and Latitude Lines, Forest Boundaries, Reservation Boundaries, Park Boundaries, Highways, Roads and Railroads.

COUNTY ATLASES

COUNTY ATLASES. The 18" x 23" half scale lithographed map pages have been assembled in multi-ring, flexible gold embossed binders to form an atlas for each of the counties. Contains both general and enlargement coverage of that county. All 14 atlases ordered at same time \$1,000.00.

Atlases are priced as follows:

Apache	70.00	Greenlee	20.00	Pinal	76.00
Cochise	72.00	Maricopa	136.00	Santa Cruz	24.00
Coconino	96.00	Mohave	98.00	Yavapai	94.00
Gila	50.00	Navaio	88.00	Yuma	68.00
Graham	34.00	Pima	102.00		

Quoted prices are for folded maps.

THERE IS A \$2.25 CHARGE PER ORDER FOR ROLLED AND TUBED MAPS

When ordering specify: County Name & Map Page Number

REMITTANCES

Remittances are deposited with the Accounting Section daily, and after deposit, no refunds can be made. Your cooperation in this respect is requested by including your remittance for the exact amount with your order. Cash, checks, and money orders will be accepted except that purchase orders of the Federal Government, the states and other political sub-divisions may be honored. In the case of mail orders, the payment must be received prior to shipment. **CASH SHOULD NOT BE SENT WITH MAIL ORDERS.**

Checks and money orders should be made payable to the Arizona Department of Transportation. Prices are subject to change. Payment must accompany all orders.

For shipment to Canada and Mexico, a surcharge of 25% and for shipment to all other countries, a surcharge of 50% of the net amount of the order must be included in the payment.

PAYMENT MUST BE IN U.S. CURRENCY.

DELIVERY

Orders not called for in person normally will be forwarded by thirdclass mail. Parcel Post or express may be utilized for large orders. Delivery charges are prepaid. Allow normal mailing time plus one day for order processing.

Address Orders to:

ARIZONA DEPARTMENT OF TRANSPORTATION
ENGINEERING RECORDS, ROOM 134A
206 SOUTH 17TH AVENUE
PHOENIX, ARIZONA 85007

Telephone: (Area Code 602) 261-7498

OCT. 14, 82

GENERAL INFORMATION

COST COMPARISON
(NO PRICE LIST AVAILABLE)

ARIZONA MAP SHOP - (PRIVATE CO.)

- B. 1:500,000 BLM STATE MAP SURFACE MANAGEMENT RESPONSIBILITY 14.95
- B. 1:1 million BLM STATE MAP SURFACE MANAGEMENT RESPONSIBILITY 9.95
- C. 1:100,000 SURFACE / MINERAL MANAGEMENT STATUS 4.95
- 1:250,000 NATIONAL TOPOGRAPHIC MAP SERIES 3.25
- 15 min. & 7.5 min U.S.G.S. TOPOGRAPHIC MAPS 2.00

General Information
Cost Comparison
(No Price List Available)

Arizona MAP SHOP - (Private Co.)

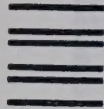
1:250,000 State Map
General Management Responsibility

1:125,000 State Map
General Management Responsibility

1:100,000 Super / Mineral Management Zone

1:250,000 Mining / Topography Map Series

1:250,000 U.S. Geological Survey Map



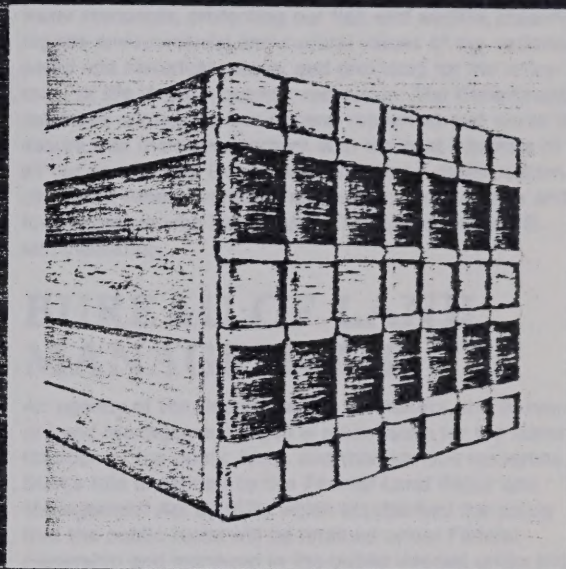
POSTAGE AND FEES PAID
U.S. DEPARTMENT OF THE INTERIOR
INT-415

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Eastern States Office
350 South Pickett Street
Alexandria, Va. 22304

OFFICIAL BUSINESS



BLM EASTERN STATES LAND RECORDS



U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
EASTERN STATES OFFICE
JUNE 1982

BLM EASTERN STATES LAND RECORDS

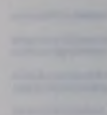


U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
EASTERN STATES OFFICE
1001 10th St.
Washington, D.C. 20004



FOR INFORMATION
CONTACT THE BLM
EASTERN STATES OFFICE
1001 10th St.
Washington, D.C. 20004
(202) 755-1200

AGRICULTURAL STATISTICS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250



EVEN IF WE DON'T HAVE IT, SOMEONE ELSE WILL

Because the Thirteen Original Colonies and their territories were not a part of the Federal lands acquired during national expansion, we do not maintain the land records of 18 eastern non-public lands States or the District of Columbia. These States are Connecticut, Delaware, Georgia, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, and West Virginia. Inquiries concerning land records for these States should be directed to the individual State archives or land record offices. It may also be worth your while to contact county offices and/or the National Archives in Washington, D.C.

Patents for lands in the Western States are maintained by BLM's eleven western offices:

Arizona:

Arizona State Office
2400 Valley Bank Center
Phoenix, AZ 85073

Alaska:

Alaska State Office
701 C Street, Box 13
Anchorage, AK 99513

California:

California State Office
Federal Office Bldg.,
Room E-2841
2800 Cottage Way
Sacramento, CA 95825

Colorado:

Colorado State Office
2000 Arapahoe Street
Denver, CO 80205

Idaho

Idaho State Office
Federal Building, Room 398
550 West Fort Street
P.O. Box 042
Boise, ID 83724

Montana, North Dakota,

South Dakota:
Montana State Office
Granite Tower, P.O. Box 30175
222 N. 32nd Street
Billings, MT 59107

Nevada:

Nevada State Office
Federal Building,
Room 3008
300 Booth Street,
P.O. Box 12000
Reno, NV 89520

New Mexico, Oklahoma:

New Mexico State Office
U.S. Post Office and
Federal Bldg.
South Federal Place,
P.O. Box 1449
Santa Fe, NM 87501

Oregon, Washington:

Oregon State Office
729 NE Oregon Street
P.O. Box 2965
Portland, OR 97208

Utah:

Utah State Office
University Club Building
136 East South Temple
Salt Lake City, UT 84111

Wyoming, Kansas, Nebraska:

Wyoming State Office
2515 Warren Ave.
P.O. Box 1828
Cheyenne, WY 82001

U.S. DEPARTMENT OF THE INTERIOR

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for the people who live in Island Territories under U.S. administration.

BUREAU OF LAND MANAGEMENT

An agency of the Department of the Interior, the Bureau of Land Management (BLM) is responsible for the administration of the public lands and their various resources. BLM's role is defined by the *Federal Land Policy and Management Act of 1976*, which established the policy that the public lands will be retained under Federal ownership and managed in the public interest under the principles of multiple use and sustained yield. BLM administers some 357 million acres of public lands—approximately 175 million acres in the lower 48 states and 182 million acres in Alaska—amounting to about one-fifth of the Nation's total land base. Through the sale of oil and gas leases, grazing rights, timber, minerals, and other raw materials and energy sources, the public lands are a substantial source of income to the Federal Treasury. The economy of many communities—particularly in the West—is based on activities stemming from the sale or lease of these resources.

EASTERN STATES OFFICE

BLM programs in the 31 states adjoining or east of the Mississippi River are the responsibility of BLM's Eastern States Office, headquartered in Alexandria, Virginia. Public lands under BLM jurisdiction in the East amount to some 60,000 acres of surface (located primarily in the States of Minnesota, Louisiana and Florida); approximately 2,800 islands; approximately 25 million acres of Federal Mineral Ownership underlying private surface, State lands, and Federal surface under the jurisdiction of other Federal agencies such as the Forest Service or the Department of Defense; and an undetermined quantity of public land, mostly adjoining rivers and coastlines, that were omitted from original surveys.



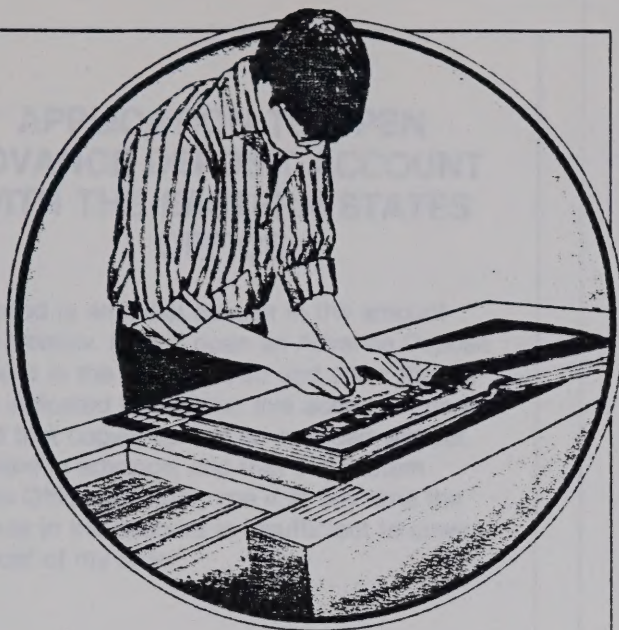
LAND RECORDS: WHERE THEY CAME FROM, HOW WE GOT THEM

As the United States expanded westward from the Thirteen Original Colonies, Congress recognized the need for an orderly system of surveying and describing the Federal lands that would be opened to settlement. The Ordinance of 1785 established the rectangular survey system and authorized the Treasury Board to sell public lands for revenue. The General Land Office (GLO) was established within the Treasury Department in 1812 to take charge of all survey and land title records. GLO became part of the newly-created Department of the Interior in 1849, and was merged with the U.S. Grazing Service in 1946 to form the Bureau of Land Management (BLM). BLM took custody of the land records, which have since grown to include some 7.5 million ownership titles covering 1.5 billion acres of present or former public domain land. Over five million of these title documents are stored and maintained at BLM's Eastern States Office in Alexandria, Virginia.

WHAT RECORDS WE MAINTAIN

The first land records to develop from the Ordinance of 1785 were survey field notes. Government surveys began in Ohio and progressed westward as more territory was opened up for settlement. Survey field notes are prepared by the surveyor; they describe the survey performed, and may include the names of settlers living in the survey area and a variety of descriptions of land formations, climate, soil, and plant and animal life. Survey *plats* are drawings of the boundaries created by each survey. Plats are prepared by draftsmen who base their drawings on information in the field notes and sketches. The earliest survey records date back to the 18th century; records produced today still follow the same basic format.

Once the public domain was surveyed, the government could begin to transfer title of land parcels to private citizens, companies and local governments. Most titles are transferred through patents (deeds) granted by the Federal Government. Records of these patents and other statements of title—such as railroad grants, swamp grants, school grants, Indian allotments, and private land claims—are contained in tract books. First developed around 1800 and maintained in the local land offices, tract books still serve as the essential reference source for all transactions involving public lands. They tell who obtained what land from the Federal Government, and when. The Eastern States Office maintains the tract books for the 13 public land States under its jurisdiction: Alabama, Arkansas, Florida, Illinois, Indiana, Iowa, Louisiana, Michigan, Minnesota, Missouri, Mississippi, Ohio, and Wisconsin.



IF WE'VE GOT IT, YOU CAN GET IT

Every month, the Eastern States Office furnishes certified photostat copies of hundreds of patents. Most requests for copies come from title attorneys and abstract companies who, before they insure title on a particular parcel of land, want to make sure the Federal Government no longer owns it. Individuals and firms involved in mineral exploration and development find these records essential in ascertaining whether mineral rights were reserved to the Federal Government when the United States conveyed title to the land. A large proportion of requests come from the Southern States, where the burning of county courthouses during the Civil War caused the loss of many title records. The records are also of value in historical research.

If you specify the legal description of the parcel or parcels, BLM's records staff can locate the patent and supply you with a copy. The legal description should include the subdivision, section, township, range, survey meridian, and State. The name of the landowner alone is not sufficient, since the land records of most States are not indexed by name.

IT COSTS, OF COURSE

Fees are not high, but the public is charged for copy work and time spent by our staff on records research. If you expect to make numerous requests for research and photostat copies, we encourage you to establish an advance deposit account. Since regulations require that payment be received before the requested material is sent out, an advance deposit account will greatly expedite your order. Any sum is sufficient to establish an account. When we receive your order, we deduct the fee from your account balance and furnish, along with the material you ordered, a receipt showing the number of copies and what you've paid for them. Soon afterward, you'll also receive an automated statement showing your adjusted balance. Your orders will be filled for as long as the account holds sufficient funds to cover their cost, or until you cancel the account. In the event you place an order and the cost exceeds the amount remaining in your account, we'll send you a notice showing the cost of your current order and the additional amount required for us to complete it.

In addition to copywork fees, you may apply against your deposit account the cost of other subscription-type orders, such as the Eastern States Office's bi-monthly list of lands available under the Simultaneous Oil and Gas Leasing System (often called the "oil and gas lottery"), as well as the list of drawing results.

Mail your orders, inquiries, or application to open an advance deposit account to this address:

**Bureau of Land Management
Eastern States Office
350 South Pickett Street
Alexandria, Virginia 22304**

APPLICATION TO OPEN ADVANCE DEPOSIT ACCOUNT WITH THE EASTERN STATES OFFICE

Enclosed is an initial deposit in the amount shown below. Please open an Advance Deposit Account in the name shown and allow the persons indicated to draw on this account. I understand that copies cannot be provided without payment in advance, and that the Eastern States Office will notify me if at any time the balance in the account is insufficient to cover the cost of my order.

\$ _____ Initial Deposit

Names of persons authorized to order from the account:

Name and address of firm or individual in whose name account is to be listed:

Signature _____

DETACH HERE

COPYWORK AND SEARCH TIME CHARGES

PROCESS OR SERVICE	PRICE
--------------------	-------

CERTIFICATION OF RECORD

Signature \$0.25

PHOTOSTAT AND CANNON MACHINE

- | | |
|--|--|
| 1. Patents | \$4.00 per page |
| 2. State Grants (Includes Swamp and Railroad Patents and Approved Lists) | \$4.00 per page |
| 3. Tract book pages | \$4.00 each |
| 4. Survey Plats | \$4.00 each <i>D.</i> |
| 5. Field Notes (For each volume) | <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> \$4.00 for 1st page
\$1.00 for each additional page </div> <i>I.</i> |
| 6. Paper Records (Includes maps and other miscellaneous documents) | \$3.00 each page up to 8 1/2" x 14"
\$4.00 each page over 8 1/2" x 14" |

XEROX MACHINE

- | | |
|--|---|
| 1. Paper Records (Includes case-type records, serial pages, letters, memoranda, and all records available to the public. Pages up to 8 1/2" x 14") | <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> \$0.25 per page
(Minimum cost per order is \$0.50) </div> <i>E.</i> |
|--|---|

MICROFILM

- | | |
|--|------------------|
| 1. Negative produced from the original documents | \$50.00 per roll |
| 2. Duplicate Copy | \$15.00 per roll |

SEARCH TIME CHARGES

If the request for copies of records requires more than one quarter hour (15 minutes) search time, a charge will be made for each additional quarter hour or fraction thereof.

- | | |
|---------------------------------------|--|
| 1. Searches by clerical personnel | \$1.20 per 1/4 hour |
| 2. Searches by professional personnel | <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> \$2.20 per 1/4 hour </div> <i>H.</i> |

REFUNDS

Refunds of less than \$1 will not be made unless specifically requested.

Refunds of more than \$1 will be sent automatically.

Questionnaire A
Interim Summary

Question: (10a.) What is the State policy regarding aerial photography mapping product sales, with regard to pricing and availability?

Utah Controlled by Branch of Information Services.

Colorado All photography request referred to DSC.

Wyoming Natural Color Prints directed to DSC for printing. Color IR original stored/duplicated at EROS. Orders placed through NCIC. Price varies between BLM and USGS by over 300%.

Oregon All SO produced maps - minimum \$1.00 +, depending on production cost (material, labor, administrative costs).

Arizona Most inquiries are directed to Arizona State Land Department. Resource Information System - NCIC Affiliate Office.

Montana All aerial photography is handled in the Division of Resource.

Alaska State utilizes price list provided by USGS, EROS Data Center as a guide.

 Availability is made public through NCIC and State and Federal MOUs.

Idaho DSC determines photography pricing since they do all the printing.

New Mexico Most products, aerial photography products, are available and sold through DSC.

California Referred to DSC.

ESO Not available at present.

DSC All aerial photography products are available to all users. Payment must accompany order prior to processing.

Questionnaire A
Interim Summary

Question: (11.) How is the variety of mapping services and products available to Bureau personnel, made known to field level personnel?

DSC No method for information dissemination except for a few mpa indices. Need to improve indices through modifications, wider distribution and development of information brochure identifying products and capabilities.

ESO Public Affairs furnishes brochure identifying available and future FMMMP maps.

California Listing.

New Mexico Sample copies available to field personnel, along with index and listing.

Idaho Map Index is available.

Alaska Products: Quarterly Graphic Report.
Services: PAWP, Utilization and Training Courses.

Montana Indices updated and submitted to District Carto personnel. District is responsible for informing DO personnel.

Arizona Branch of Engineering distributes copies of each map to DOs. They in turn distribute to RAs.

Oregon Catalogs, mapping indices, etc., are sent to a mapping coordinator in each District Office.

Wyoming SO (941) conducts annual field orientation workshops for DOs/RAs - mapping, aerial photography and remote sensing. Indices are updated annually, on-the-job training also provided. More data needed regarding DSC and USGS schedules for map production.

Colorado No catalog or list of map products exists in Colorado. Product availability is identified in oral presentations to field personnel. Capabilities also identified in PAWP and AWP.

Utah A list of available carto products is provided (Color and B&W). Also provide SO carto workload and production status for corresponding FY.

Nevada SO provides catalogs - needs to be updated.

Questionnaire A
Interim Summary

Question: (12.) Are there mapping products currently produced at the State level, District level or DSC which you feel should be produced at another level?

DSC No. However, there is a need to improve information exchange among states and levels of responsibility.

ESO N/A

California No.

New Mexico No.

Idaho No.

Alaska No.

Montana No.

Arizona DO could perform graphic projects and some mapping, if they had drafting personnel. All 1:100k could be done at DSC, with emphasis upon identifying other agency lands, and concentrating effort on completing at least one Bureau mapping series for the state.

Oregon All mapping products should be produced at the SO level, except national series, e.g., 1:100k. Better control and accuracy at SO levels.

Wyoming USGS currently producing cadastral land nets for 7.5 minute topos and digital line graphics, which the Department manual states are BLM responsibilities.

Not currently within the knowledge of SO Carto personnel. Economics of consolidation for certain maps limits the organization level of map production within BLM. Question SO capability to revise 100k, 500k and 1,000k surface and minerals status maps.

Colorado No. Locations seem appropriate.

Utah N/C

Nevada N/C

Question (11): Are there passing products currently produced at the State level, District level or the local level? (produced at various levels)

Ans. However, there is a need to improve information exchange among states and levels of responsibility.

Q/A

No.

No.

No.

No.

No.

No.

It could pattern specific projects and more mapping, if they had existing personnel. All 1:100K could be done at USC, with specific maps identifying other agency lands, and concentrating efforts on completing at least one Bureau mapping series for the state.

All mapping products should be produced at the 50 level, except national series, e.g., 1:100K. Better control and consistency at 50 level.

USGS currently producing national land use 1:50,000 scale maps and digital data products, which the Department should evaluate and use responsibility.

Not currently within the knowledge of 50 State personnel. However, it would be for certain maps like the Organizational level of our presentation with 50. Question 50 capability to create 100K, 50K and 1:50K series and products within scope.

No. Information from correspondence.

No.

No.

Questionnaire A
Interim Summary

Question: 13./13a.

Are there map products not currently available to the Bureau which should be produced by the Bureau?

If yes, what are they?

	<u>Response</u>	<u>Description</u>
Alaska	No	
California	No	
Montana	None	
Colorado	None	
Idaho	Yes	Bureauwide Recreation Map
Utah	Yes	Recreation Maps - ORV
New Mexico	No	
Arizona	No	
Wyoming	Yes	DEMs, DLCs
Oregon	Yes	Topos 1"=400" and 1'=1,000'
DSC	Yes	Orthophotos
ESO	Yes	Federal Mineral Ownership (No MTPs available.)
Nevada	Yes	Complete recreation series.

Bureauwide Mapping Study
Questionnaire A
Summary of Responses

TRAINING - NEEDS ASSESSMENT

--Qualifying Statements

--Respondents include 11 SOs, ESO and DSC.

--Issue Identification and Analysis

92% of respondents feel that training opportunities for SO Mapping personnel are inadequate (exception - California).

Majority of respondents did not identify specific adverse effects of inadequate training opportunities. It was generally felt that ignorance of the state-of-the-art would result in Mapping Program stagnation and lack of efficiency.

Three states (Colorado, Wyoming, Oregon) did identify that a lack of a formal training mechanism required the need for on-the-job training; their contention being that on-the-job training requires a substantial decrease in individual employee productive time (both trainee and trainer). Examples of how training in new technologies may improve productivity was provided by Wyoming (Refer to Enclosure 12).

The vast majority of respondents (92%) specifically identified on-the-job training as being their principal training source. Notable exceptions include Alaska and Wyoming. Alaska has developed training programs which meet specific problems encountered within Alaska. Wyoming also has utilized the expertise of their in-house Cartographer to develop a basic Carto Drafting course (in conjunction with a local school). Since Basic Carto Training is the #2 priority identified in question 21, consideration should be given to having Wyoming assist in the development

TRAINING - REPAIR ASSISTANT

Qualifying Requirements

--Applicants should be 18 years of age, 5'6" and over.

Issue Identification and Analysis

51% of respondents feel that training opportunities for 10 weeks

potentially and independent (experience - California).

Majority of respondents also are highly specific about nature of

independent training opportunities. It was generally felt that

of the state-of-the-art would result in helping program to

and state of efficiency.

These areas (training, testing, research) did identify the lack of a

formal training curriculum required for the state-of-the-art.

These comments indicate that as the state-of-the-art becomes a

document in technical equipment production and their training and

training. Training of new training is one responsibility and

responsibility was provided by training officer in California.

The state-of-the-art (California) is currently identified as the

training as well as technical training system. The state-of-the-art

includes Alaska and Hawaii. Alaska has developed training program

which has specific training opportunities within Alaska. Training also

has included the opportunity to train in-state (California) to develop

a state-of-the-art training course in California with a local course.

These state-of-the-art training is not to be identified as a

responsibility should be given to training officer in the development

of a Bureauwide Basic Carto course. DSC input to current mapping training appears to be limited to Cadastral plat preparation (D-410) and Remote Sensing training courses (D-440).

The prioritization of potential training courses needed in BLM clearly identified Auto-Carto training as the top priority (8:13 responses or 62%.)

The development of a Basic Carto course rated second (2nd). Refer to pertinent comments on question 20.

An advanced Map Design course rated third. A Photo Interpretation course rated fourth, and miscellaneous training needs including Photogrammetry, Graphic Design, L&M Status Research and Litho-Reproduction rated last place.

The Bureau Mapping Training emphasis to date appears to focus upon photo interpretation (4th) and no focus on auto-carto (#1) at all.

Refer to Enclosure 13 for state by state response chart.

The majority of responses (11:13 or 85%) felt that a certain degree of DSC responsibility for conducting a Mapping Training program is necessary.

However, 6:13 or 46% of the respondents also felt that the State Offices have varying degrees of responsibility for conducting mapping-related training.

Only four respondents (including DSC)(25%) felt that this was solely a DSC responsibility.

Comments on how to evaluate effectiveness of training programs include:

- Identify reduction in user inquiries.
- Identify increased quality of products (how?).
- Use of follow-up questionnaire (Perf./Prod. oriented).
- Identify increased usage of maps.
- Successful use of GIS system (Refer to Enclosure 3 for example).
- Use of SF-182.

Ninety-two (92) percent of respondents feel they have a system to help identify the type and volume of maps produced by individual employees. If this is true, then it will be possible to measure the effectiveness of future mapping-related training programs.

INPUT:

Soil Data Compiled on Overlay to a
7.5 - 1,25,000 Scale Orthophotomosaic

OUTPUT:

Drafted Soil Overlay with Summary
of Acreages by Soil Type

MANUAL METHOD:

Ink Drafting	2 WD
Area Measurement	2 WD
Checking & Summation	1 WD
	5 WD

COMPUTER ASSISTED:

Digitizing	1 WD
Plotting & Acreage	2 WD
Verify & Summation	By Product
	3 WD

Only four respondents (including MW) said that this was solely

a job responsibility.

Comments on how to evaluate effectiveness of training program included:

—Identify reduction in work incidents.

—Identify increased quality of products (MW).

—Use of follow-up questionnaire (MW, Fred, unnamed).

—Identify increased usage of tools.

—Successful use of OIS system (later in document 3 for example).

—Use of 5S-151.

Minority (25) percent of respondents said they saw a system to help

identify the type and volume of work produced by individual employees.

If this is true, then it will be possible to

measure the effectiveness of future ongoing-related training programs.

RESOURCE DATA ANALYSIS COAL LEASE PLANNING

INPUT: 7 to 20 Layers of Resource Data for 27 - 7.5' Topo
Maps (900,000 Acres)

OUTPUT: Acres & Coal Tonnages for 20 Suitability Criteria --
Maps for Publication & Public Meeting

DO MANUAL METHOD

Planimeter Overlays	15 WM
Reduce & Compile Data	2 WM
Publication Maps	1 WM
Drafting Public Maps	1 WM

MANUAL 19 WM
Field Office Savings -17 WM

COMPUTER GIS METHOD

Digitize 396 Overlays	3 WM
Varify & Correction	1 WM
Analysis, Merge & Reduce Maps	1 WM
Publication Maps	1 WM
Plot Public Maps	—

COMPUTER *6 WM
Technographics Increase +4 WM

*6 WM's included training and OJT.

EXAMPLE : SOILS MAPPING/ 7.5' UNIT

INPUT: Soils Data Compiled on Overlay to a
7.5' - 1:24,000 Scale Orthophotoquad

OUTPUT: Drafted Soil Overlay with Summation
of Acreages by Soil Type

MANUAL METHOD

Ink Drafting	2 WD
Area Measurement	2 WD
Checking & Summation	1 WD

5 WD

COMPUTER ASSISTED

Digitizing	1 WD
Plotting & Acreage	.5 WD
Varify & Summation	By-Product

1.5 WD

RESOURCE DATA ANALYSIS COAL LEASE PLANNING

INPUT: 1 to 30 Layers of Resource Data for 25 1/2' Topo
Map (900 000 Acres)

OUTPUT: Add to Coal Tennesses for 25 1/2' Topo
Map for Publication & Public Meeting

COMPUTER GIS METHOD

Digitize 250 Overlays
Verify & Correction
1 WM
1 WM
Analysis, Merge &
Reduce Maps
1 WM
Publication Map
1 WM
Plot Public Map
—
Equipment 10 WM
Technician Increase 10 WM

DO MANUAL METHOD

Planimeter Overlays
Reduce & Compare
1 WM
1 WM
Publication Map
1 WM
Creating Public Map
1 WM
Equipment 10 WM
Technician Increase 10 WM

* 10' 1/2" included creating and G.I.T.

EXAMPLE: SOILS MAPPING 1/2 UNIT

INPUT: Soil Data Compiled on Overlay to a
1/2 - 1/2 1/2 Soil Overlay

OUTPUT: District Soil Overlay with Summary
of Average by Soil Type

COMPUTER ASSISTED

Overlaying
District & Average
Verify & Summarize
1 WM
2 WM
By Product
1 WM

MANUAL METHOD

Map District
Area Measurement
1 WM
1 WM
Summary
1 WM

QUESTIONNAIRE A - INTERIM SUMMARY
BUREAU PRIORITIZATION OF NEEDED
TRAINING COURSES

ESO	DSC	Prod./Mgr.												Numeric Value	Priority Rating
		OR	WY	AZ	NM	UT	ID	CO	MT	CA	AK	NV			
Basic Carto	2	1	4	1	1	1	--	1	3	3	--	3	4	38	2
Advanced Map Design --	4	1	3	4	2	1	1	1	2	2	--	4	3	41	3
Auto Carto	1	3	2	5	1	3	1	1	5	1	1	1	2	1	28
Photo Interpretation 3	2	3	3	2	5	4	1	--	4	4	4	--	1	2	47
Other	--	2	3	4	3	--	1	--	3	--	--	--	--	58	5

Photogrammetry
Graphic Design
Anal. Photogr.
L&M Status Search
Litho-Reprod.
& Graphic Arts

NOTE: Higher priority training received a lower numeric value. No priority ID received highest numeric value.
DSC ID separate training needs for map producers and cartographic managers.



BUREAUWIDE MAPPING STUDY
QUESTIONNAIRE A
SUMMARY OF RESPONSES

ORGANIZATION STRUCTURE

--24. 77% of respondents have identified a mapping organization within the SO Division of Operations. Two organizations (ESO, DSC) have anomolie mapping organization structures which are basically operational support. Montana is the only state which identifies mapping support within the Division of Administration. 38% or five states (New Mexico, Idaho, Arizona, Wyoming, Nevada) identify mapping activities as being related to Engineering related functions. 31% or four states (ESO, California, Oregon, Utah) and DSC have identified mapping and cadastral survey activities into a combined organization. 15% (Alaska and Colorado) have separate organizational entities within the Division of Operations providing mapping related support. Branch of Photogrammetry, Branch of Cartography Services respectively.

(Refer to Enclosures 14-1 through 14-4.)

Enclosure 15 identifies the preferred organizational location of mapping activities.

MAPPING ACTIVITY
(ORGANIZATION LOCATION, GRADE, OCCUPATION SERIES)

NEW MEXICO

BRANCH OF ENGINEERING &
SUPPORT SERVICES
SUP. CIVIL ENGR. 13

GRAPHICS SECTION
SUP. CARTO TECH 9

NEVADA

BRANCH OF ENGINEERING &
SUPPORT SERVICES
SUP. CIVIL ENGR. 13

CARTOGRAPHIC SEC.
SUP. CARTO TECH 12

IDAHO

BRANCH OF ENGINEERING &
SUPPORT SERVICES
BR. CHIEF, ENGR. 12

CARTOGRAPHIC SEC.
SUP. ACCESS & CARTO
SPEC. 11

WYOMING

BRANCH OF ENGINEERING &
SUPPORT SERVICES
SUP. CIVIL ENGR. 13

FIELD OPER. SEC.
CARTOGRAPHER 12

DRAFTING SEC.
SUP. DRAFT ENGR. 10

ARIZONA

BRANCH OF ENGINEERING &
SUPPORT SERVICES
SUP. CIVIL ENGR. 13

SUP. ENGR. TECH. 9

SUBORDINATE TO ENGINEERING FUNCTION

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

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2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

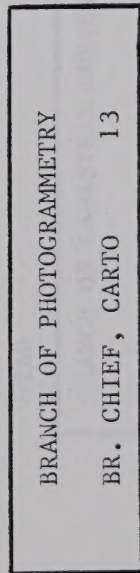
2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

2025 RELEASE UNDER E.O. 14176

MAPPING ACTIVITY
(ORGANIZATION LOCATION, GRADE, OCCUPATION SERIES)

ALASKA



MAPPING SEC.
SUP. CARTOGRAPHER 12

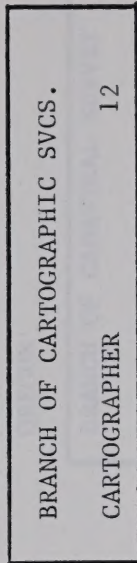
CARTO-REPRO SEC.
SUP. CARTO TECH 11

AUTO CARTO UNIT

PHOTO-LAB UNIT

PRINTING SVCS. UNIT

COLORADO



MAPPING SEC.
SUP. CARTO TECH 9

PHOTOGRAMMETRIC SEC.
SUP. CARTOGRAPHER 11

GRAPHIC & VISUAL AIDS SEC.
SUP. ILLUSTRATOR 10

MANUAL DRAFTING SEC.
SUP. CARTO TECH 9

MAPPING ACTIVITY
(ORGANIZATION LOCATION, GRADE, OCCUPATION SERIES)

UTAH

BRANCH OF CADASTRAL SURVEY
BR. CHIEF, LAND SURVEYOR 13

CARTOGRAPHIC SEC.
SUP. CARTO TECH 10

OREGON

BRANCH OF CADASTRAL SURVEY
BR. CHIEF, LAND SURVEYOR 13

CADASTRAL OFFICE SEC.
SUP. LAND SURVEYOR 12

LEAD CARTO TECH 9

CALIFORNIA

BRANCH OF CADASTRAL SURVEY
BR. CHIEF, LAND SURVEYOR 14

SPECIAL SURVEY SEC.
SUP. LAND SURVEYOR 13

CARTOGRAPHIC SVCS. UNIT
SUP. CARTO TECH 9

ESO

DIVISION OF CADASTRAL SURVEY
DIV. CHIEF, LAND SURVEYOR 14

BR. OFFICE ENGR. & SUPPORT
SERVICES
SUP. LAND SURVEYOR 12

SUBORDINATE TO CADASTRAL FUNCTIONS

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

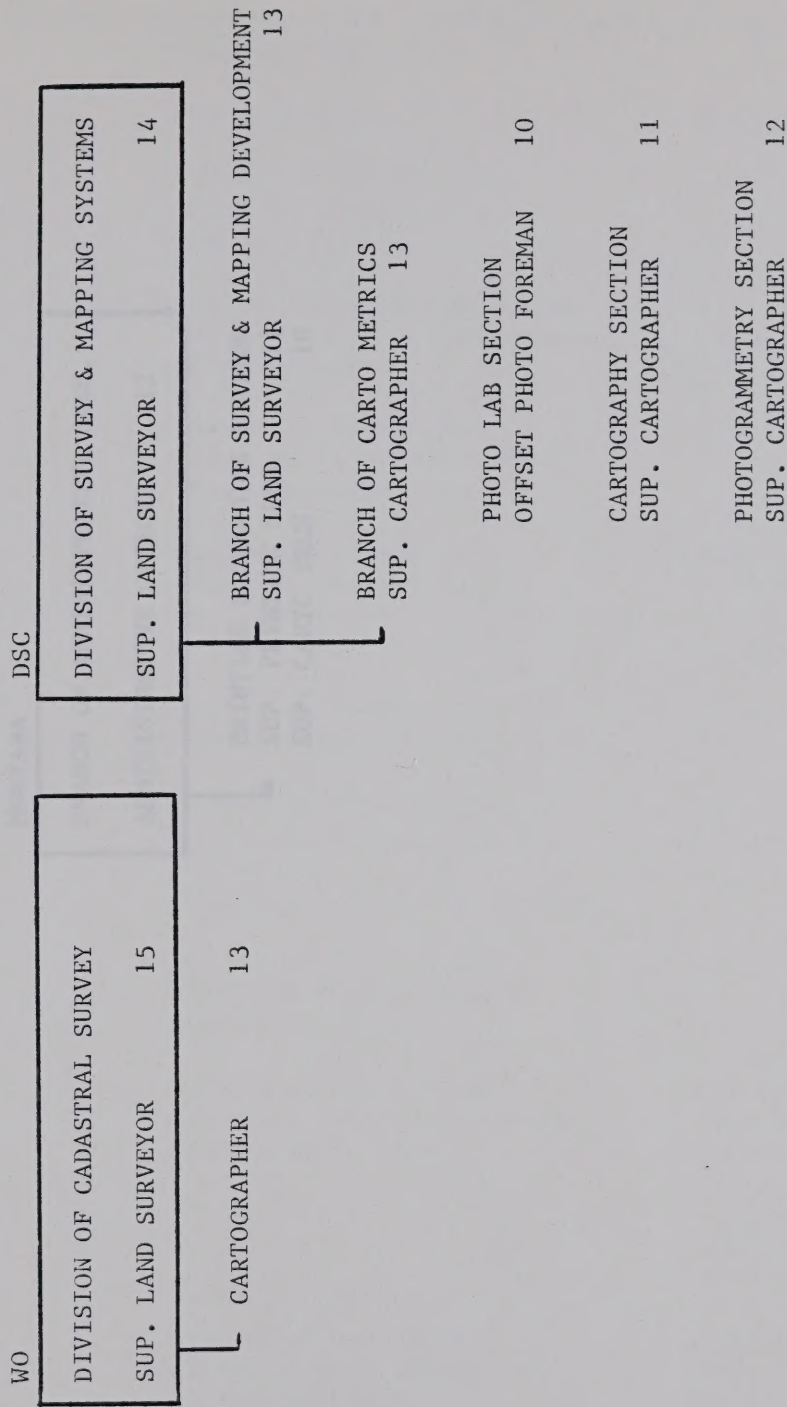
2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

2017-2018 ANNUAL REPORT

2017-2018 ANNUAL REPORT
CONSTITUTIONAL RIGHTS

MAPPING ACTIVITY
(ORGANIZATION LOCATION, GRADE, OCCUPATION SERIES)



SUBORDINATE TO CADASTRAL FUNCTIONS

DESCRIPTION OF CYCLOIDAL SECTION

13 -
CYCLOIDAL SECTION

14 -
CYCLOIDAL SECTION

15 -
CYCLOIDAL SECTION

16 -
CYCLOIDAL SECTION

17 -
CYCLOIDAL SECTION

18 -
CYCLOIDAL SECTION

19 -
CYCLOIDAL SECTION

20 -
CYCLOIDAL SECTION

(CYCLOIDAL SECTION) (CYCLOIDAL SECTION) (CYCLOIDAL SECTION)

MAPPING ACTIVITY
(ORGANIZATION LOCATION, GRADE, OCCUPATION SERIES)

MONTANA

BRANCH OF ADMINISTRATIVE SVCS.	
ADMINISTRATIVE OFFICER	12

PRINTING & GRAPHICS SECTION
SUP. PRINTING SPEC. 11
SUP. CARTO TECH 10

SUBORDINATE TO ADMINISTRATIVE FUNCTION

DECLARATION OF INTEREST

10. I am not a member of the
11. I am not a member of the
12. I am not a member of the

DECLARATION OF INTEREST	75
DECLARATION OF INTEREST	

DECLARATION

DECLARATION OF INTEREST (Form 10-2)

Questionnaire A
Interim Summary

Question: 24./25. Please identify current and proposed organizational location of mapping functions.

	<u>Current Location</u>	<u>Preferred Location</u>
New Mexico (941)	Division of Operations, Branch of Engineering and Support Services	As Is
ESO (942)	Division of Cadastral Survey Branch of Office Engineering and Cartography	-
California (942)	Division of Operations Branch of Cadastral Survey Carto Services Unit	N/C
Idaho (941)	Division of Operations Branch of Engineering Carto Services	Mapping Organization - Thematic Map Section - Planimetric Map Section - Reproduction Section
Alaska (947)	Division of Operations Branch of Photogrammetry	As Is
Montana (951)	Division of Administration Branch of Administrative Services Printing & Graphics Section	Division of Operations Branch of Mapping
Arizona (941)	Division of Operations Branch of Engineering & Support Services	-
Oregon (942)	Division of Operations Branch of Cadastral Surveys Cartographic Unit	Division of Operations Branch of Mapping Field Surveys Topo Mapping Compilation/Scribing Graphic Design Photolab
Wyoming (941)	Division of Operations Branch of Engineering and Support Services	Combine cartographic drafting and MTP drafting into an automated data base.

Question: 24.11. Please identify current and proposed organizational functions of mapping functions.

Preferred Location

Current Location

New Mexico
(941)

Division of Operations,
Branch of Engineering and
Support Services

As is

ESD

(942)

Division of Operations (New)
Branch of Office Engineering
and Cartography

California
(943)

Division of Operations
Branch of Cartographic Survey
Cartographic Services Unit

N/C

India

(944)

Division of Operations
Branch of Engineering
Cartographic Services

Mapping Organization
- Technical Map Section
- Administrative Map Section
- Hydrographic Section

Alaska

(945)

Division of Operations
Branch of Photography

As is

Minnesota

(946)

Division of Administration
Branch of Administration
System
Planning & Training Section

Division of Operations
Branch of Mapping

Arkansas

(947)

Division of Operations
Branch of Engineering &
Support Services

Oregon

(948)

Division of Operations
Branch of Cartographic Support
Cartographic Unit

Division of Operations
Branch of Mapping
Field Section
Type Mapping
Compensation Mapping
Graphic Design
Technical

Wyoming

(949)

Division of Operations
Branch of Engineering and
Support Services

Division of Operations
Branch of Mapping and NIP Mapping
There are no current data here.

	<u>Current Location</u>	<u>Preferred Location</u>
Colorado (945)	Division of Operations Branch of Carto Services - Photogrammetric Section - Mapping Section - Manual Draft Section - Comp. Section - Graphic/Illustrative	-
Nevada	Division of Operations Branch of Engineering and Support Services Carto Section	Division of Operations Branch of Mapping
Utah (943)	Division of Operations Branch of Cadastral Survey Cartographic Service Unit	Branch of Cartographic Services
DSC (410)	ASCD, Technical & Scientific Systems Division of Survey & Mapping	Production/Support Coord. Development Training

Colorado
(1945)

Division of Operations
Branch of Data Services
- Photogrammetric Section
- Mapping Section
- General Staff Section
- Camp, Section
- Geographic Information

Canada

Division of Operations
Branch of Engineering and
Support Services
Data Section

Canada
(1945)

Division of Operations
Branch of Technical Survey
Cartographic Service Unit

Canada
(1945)

ASST, Technical & Scientific
Branch
Division of Survey & Mapping

Production/Support
Branch Development
Training

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Qualifying Statements

Questionnaire B is geared toward non-supervisory map producers located in the State Office and Service Center. Responses to this questionnaire tend to focus upon individual preferences and opinions. In many cases there is no consensus of opinion. Also, state by state responses may reflect the thoughts of a dozen or so mapping personnel or, it may reflect the input of a single respondent. Often times diverse viewpoints were discovered within a single office.

General Morale

Response to questions 3, 4, 5, 7 and 8 tend to focus upon the general morale of employees associated with the physical preparation of mapping products.

When asked to rate their mapping programs with those of other Federal agencies, 48% of the total number of respondents did not feel familiar with other agency programs. 42% felt their programs were either average or above average. 10% of the respondents felt their program to be below average. The majority of negative responses came from the Alaska SO (Refer to Enclosure 1).

The most common statements made regarding the strengths of the mapping program dealt with the integrity, dedication and experience of mapping personnel. (Refer to Enclosure 2)

When asked what the greatest weaknesses of the mapping program, there was no overwhelming consensus of opinion. In fact, many of the identified weaknesses are also identified as many of mapping program strengths. (Refer to Enclosure 3)

Mapping personnel tend to exhibit a strong sense of pride associated with the individual mapping programs of which they are a part. Ninety-eight percent (98%) of the respondents felt that their particular mapping programs are important, very important or are top priority. A small fraction (2%) did not feel that their programs were so important (Refer to Enclosure 4).

However, a level of frustration appears to be evident in that 35% of map producers are either not interested or are noncommittal in thinking of their future in BLM (Refer to Enclosure 5). Thirty-nine percent (39%) to forty-eight percent (48%) are either noncommittal or do not plan to stay within the Bureau's mapping program (Refer to Enclosure 6).

This frustration mirrors the fact that many map producers do not feel that non-mapping professionals/managers view the mapping function in high regard.

(Note: The responses made by functional specialist and field managers conflicts with this negative feeling.)

When asked what the greatest weakness of the mapping program, there was no overwhelming consensus of opinion. In fact, none of the identified weaknesses are also identified as being of mapping program strengths. (Refer to Enclosure 2)

Mapping personnel tend to exhibit a strong sense of pride associated with the individual mapping program of which they are a part. Twenty-eight percent (58%) of the respondents felt that their particular mapping program was important, very important or the top priority. A small fraction (12%) did not feel that their program was as important. (Refer to Enclosure 3).

However, a level of dissatisfaction seems to be evident in that 12% of map producers are either not interested or are dissatisfied in carrying out their jobs in the United States. (Refer to Enclosure 4). Thirty-eight percent (58%) of the respondents (58%) did not feel that their mapping program was as important or was not given as much priority as the mapping program. (Refer to Enclosure 5).

These findings suggest that the fact that map producers do not feel that mapping programs are important, however, view the mapping function as high regard. (Refer to Enclosure 6) The responses were of technical specialists and that response conflict with this negative finding.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 3. In comparison with other Federal agencies, I would rate the mapping program I work with:

	<u>Below Avg.</u> (1.)	<u>Avg.</u> (2.)	<u>Above Avg.</u> (3.)	<u>Not Familiar With Other Agencies</u> (4.)
Arizona	-	1	-	-
Wyoming	-	-	1	-
Idaho	-	3	-	1
Utah	-	-	1	1
New Mexico	-	-	-	5
Colorado	-	1	-	2
Montana	1	1	1	3
California	-	-	-	3
ESO	-	-	-	2
Alaska	3	-	4	1
Oregon	1	2	1	5
Nevada	1	-	1	1
DSC	-	4	3	4
Total	6 (10%)	12 (21%)	12 (21%)	28 (48%)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 4. State, in your judgment the greatest strength of the mapping program.

Arizona	1:100,000 map series.
Wyoming	Mapping standards.
Idaho	30' quad series, program flexibility to produce any type of map.
Utah	Diversity of projects. BLM and university training opportunities. Treated as professionals.
New Mexico	People support attitude and skills, 1:100,000 map series.
Colorado	People - skills, future oriented personnel, computer assisted drafting ability.
Montana	1:100,000 map series, people - skills, mapping coordinator in each District Office, equipment.
California	Personnel - flexibility/experience. Ability to produce a wide variety of products.
ESO	Private industry demand for maps. Ability to gather and sort surface and minerals ownership data and present in map form.
Alaska	Technology, dedicated personnel, experienced personnel, training availability.
Oregon	Personnel, photolab capability, rapport with DSC, aerial photo, remote sensing, numerous map bases and scales, spirit of cooperation.
Nevada	Technology capability, ability to produce a variety of maps, map product utilization by public and other agencies. 7½' orthophoto quads.
DSC	People - skills, 1:100,000, 1:500,000 map series, product quality.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 5. State briefly in your judgment the greatest weakness of the mapping program.

Arizona	Timeliness of data, MTP accuracy.
Wyoming	Human error.
Idaho	Equipment, communications with DO, lack of funding.
Utah	Negative recognition by management of carto skills.
New Mexico	Poor grade structure, lack of training opportunity, lack of funds, not understanding other agency programs, equipment, manager support, 1/2' color quads not to scale.
Colorado	Editing, training, quality standards, planning, environmental controls, qualified personnel, no mapping clearinghouse for information at the SO level.
Montana	Discrepancies in maps, lack of training, nominal feedback by users, WO/DSC/SO coordination, funding, planning, overall direction.
California	No mapping program, shifting priorities, no complete in-house base map series.
ESO	Behind private industry, map completion cycle too long - up to 3 years.
Alaska	Planning manpower needs, user-producer communication, understaffed, adjudication, cross training, Data General response time, training, high turnover, high production goals, equipment utilization.
Oregon	Technology development, mapping personnel considered second class professionals, more priorities, lack of personnel, employee awareness, total mapping process.
Nevada	Internal cooperation, program awareness (users), map maintenance/ updating, equipment.
DSC	Monotony of tasks, overall poor communications, lack of work variety, land status data not up-to-date, lack of future mapping program goals, training.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 7. How important do you feel the mapping program is to overall Bureau objectives?

	Top Priority 1	Very Important 2	Important 3	Not Very Important 4	Unimportant 5
Arizona	-	1	-	-	-
Wyoming	1	-	-	-	-
Idaho	1	3	-	-	-
Utah	1	1	-	-	-
New Mexico	3	2	-	-	-
Colorado	1	2	-	-	-
Montana	1	4	-	-	-
California	-	2	1	-	-
ESO	-	2	-	-	-
Alaska	2	2	2	-	-
Oregon	3	5	-	1	-
Nevada	1	1	2	-	-
DSC	2	8	1	-	-
Total	16 (29%)	33 (58%)	6 (11%)	1 (2%)	

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 8a. Thinking ahead five years, would you still want to work for the Bureau?

	Yes	Maybe	No	??
Arizona	1	-	-	-
Wyoming	-	1	-	-
Idaho	4	-	-	-
Utah	1	-	1	-
New Mexico	4	1	-	-
Colorado	1	1	1	-
Montana	5	-	-	-
California	1	1	1	-
ESO	1	1	-	-
Alaska	2	2	1	-
Oregon	5	1	1	2
Nevada	2	1	1	-
DSC	6	3	2	1
Total	33 (59%)	12 (21%)	8 (14%)	3 (5%)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 8b. In the mapping program?

	Yes	Maybe	No	??
Arizona	1	-	-	-
Wyoming	1	-	-	-
Idaho	4	-	-	-
Utah	2	-	-	-
New Mexico	4	1	-	-
Colorado	1	1	1	-
Montana	4	-	1	-
California	-	2	1	-
ESO	-	2	-	-
Alaska	2	1	2	1
Oregon	6	2	-	1
Nevada	2	-	1	1
DSC	3	5	2	2
Total	30 (53%)	14 (25%)	8 (14%)	5 (9%)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Planning and Budget

Direct supervisory assignment of work was the most common response regarding "how work assignments are made." (Refer to Enclosure 7)

When asked if the current systems for assigning work could be improved, forty percent (40%) replied no, whereas 49% felt it could be improved. Eleven percent (11%) did not comment. No comments may be indicative of a hesitancy to identify that the current systems could be improved. (Refer to Enclosure 8)

The major response regarding "How to" improve the current assignment systems revolved around improved communications between map producing personnel and personnel requesting mapping assistance. Another common request was that mapping personnel be kept informed of changes/status of the various mapping program efforts. (Refer to Enclosure 9)

There was no conclusive consensus of opinion regarding where mapping personnel felt their current mapping programs would be within the next five years. (Refer to Enclosure 10)

In anticipation of changes in map production methods, computer training and equipment procurements were identified as having the most direct implication to mapping personnel. (Refer to Enclosure 11)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 1. How are assignments made to you?

Arizona	Via supervisor.
Wyoming	Via supervisor.
Idaho	Via supervisor, PIPR.
Utah	Via supervisor.
New Mexico	PIPR, PD, work order slips.
Colorado	PIPR, supervisors.
Montana	PIPR, supervisor, project number.
California	Form 9160-1, supervisor.
ESO	PIPR, AWP.
Alaska	PIPR, quotas.
Oregon	Coworkers (part of process), supervisor, PIPR.
Nevada	PIPR.
DSC	PIPR, jacket number, supervisor, coworker (part of process), annual quotas.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 2. Could this system be improved?

	Yes	No	
Arizona	1	-	
Wyoming	-	1	
Idaho	2	1	
Utah	-	2	
New Mexico	1	2	
Colorado	2	1	
Montana	4	2	
California	1	2	
ESO	1	1	
Alaska	3	3	
Oregon	5	3	
Nevada	3	-	
DSC	5	5	
Total	28 (49%)	23 (40%)	6 N/C (11%)

No comments appeared to be indicative of a hesitancy to make a negative remark.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 2a. If yes, how?

Arizona	Consistency in utilization of latest technological advances, employee awareness of program status.
Wyoming	N/C.
Idaho	DO - advanced planning system, employee involvement with planning, assignments made by one individual.
Utah	N/C.
New Mexico	Closer coordination with personnel ordering maps, establish a log.
Colorado	Utilize work orders, timeliness, better planning.
Montana	Additional reviews, improve planning efforts, DO-SO coordination.
California	Increased involvement earlier in planning process.
ESO	Timeliness of map requests (from Denver).
Alaska	Improved equipment, additional lead time.
Oregon	Increase employee involvement/awareness of project status, earlier preplanning/coordination.
Nevada	Improve planning process to reduce ever shifting work priorities, improved equipment.
DSC	Improve peer communication, employee awareness of program status, improve planning process to anticipate state needs.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 6. What do you view as the five year goals of the current mapping program?

Arizona	N/C.
Wyoming	Increased cooperation between agencies, systems analysis, increased utilization auto--graphic equipment, increased availability of map data.
Idaho	Update 36 minute quads, complete EIS, begin digitization, complete orthophoto quads, improved training.
Utah	Digitizing, specialized projects, increased use of 7½' 1:24,000 orthophoto base, increased utilization of aerial photography.
New Mexico	Increased 1:100,000 coverage, office space.
Colorado	Automation, increase in-house capabilities, space.
Montana	Completion of 1:100,000 for Montana, North Dakota, South Dakota, automation, update 1:500,000 series, new recreational map series.
California	There are none. Meetings and MM map program needs, special program needs.
ESO	Consistency in map sales, Minnesota map update.
Alaska	Automation, orthophoto coverage.
Oregon	Aerial photo coverage - western Districts, large scale topo mapping, update planimetric maps, complete various programs, furnish 1" = 400' 20' CI map.
Nevada	Complete coverage, ADP printout of available map products.
DSC	Automation, complete 1:100,000 series, training emphasis.

Summary of Responses
Questionnaire 2
Survey of Mapping

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Question:	What do you view as the five year needs of the current mapping program?
Alaska	W.C.
Alaska	Increased cooperation between agencies, systems analysis, increased utilization auto-graphic equipment, increased availability of data.
Idaho	Update to state-wide, computerized GIS, better digitization, computerized maps, improved training.
Utah	Updating, automated programs, increased use of 7 1/2, 1:25,000 orthorectified base, increased utilization of aerial photography.
New Mexico	Increased 1:50,000 coverage, office space.
Colorado	Automation, increased in-house capabilities, more.
Montana	Continuation of 1:50,000 for Montana, North Dakota, South Dakota, automation, update 1:50,000 series, new technological map series.
California	There are none. Existing and in map program needs, special program needs.
Nevada	Continuation to map series, wilderness map update.
Alaska	Automation, auto-graphic equipment.
Oregon	Aerial photo coverage - western districts, large scale topographic update, automatic map, computerized version programs, funding 1:50,000, 1:25,000.
Nevada	Continued coverage, GIS program of available map products.
Nevada	Automation, computer 1:50,000 series, training equipment.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 9. Within the next 2-5 years, in your office, do you anticipate map production methods to change? If so, please specify how and what impact this will have (e.g., equipment purchase, skill mix change, training needs, more or fewer employees, etc.

	Yes, How	No
Arizona	1, Computerized MTP info retrieval	
Wyoming	1, Computer training.	
Idaho	2, Digitization, film processing capability	2
Utah	2, Computer training.	
New Mexico	2, No change - past experience, more training, higher grades, new equipment.	3
Colorado	3, New equipment, personnel training, revise $\frac{1}{2}$ "=1 mile map to 1:100,000 series.	
Montana	1, Equipment procurements, personnel training, thematic map revisions.	
California	1, Equipment procurement	2
ESO	1, Review 1:100,000 series to 2"=1 mile map reproduction machine, additional personnel.	1
Alaska	5, Computer training, increased photolab demands	1
Oregon	3, Computer training, continued contracting for services, equipment purchases, improved lettering process.	4
Nevada	1,	
DSC	8, Training requirements, gradual change from old-new methods, equipment purchase.	2

(Numerous no comments.)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Training

Seventy-two percent (72%) of respondents did not feel that there is adequate training opportunities for state mapping personnel. (Refer to Enclosure 13)

On-the-job training was overwhelmingly identified as the major training methodology/technique used to train SO/DO mapping personnel. (Refer to Enclosure 14)

Mandate from mapping producers gives a favorable edge to establishment of a Basic Cartography Course, as the Bureau's #1 training priority. (Refer to Enclosure 15).

No clear mandate exists regarding who should have responsibility for conducting a mapping training program. (Refer to Enclosure 16)

Numerous comments were received on how to measure the effectiveness of a training program. Of particular interest is the fact that many respondents are in favor of some type of written test or examination. This contrasts sharply with out historical attempts to judge the effectiveness of a training program based on subjective opinion or popularity polls. (Refer to Enclosure 17)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Training

Question: 11. Do you feel there are adequate training opportunities for your state's mapping personnel?

	Yes	No
Arizona	-	1
Wyoming	-	1
Idaho	1	3
Utah	-	2
New Mexico	1	4
Colorado	-	3
Montana	2	5
California	1	1
ESO	2	-
Alaska	2	5
Oregon	3	6
Nevada	1	3
DSC	3	8
Total	16 (28%)	42 (72%)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 12. What training methods are currently available to SO/DO mapping personnel?

Arizona	OJT, 3 day course - Interpreting Land Status Records.
Wyoming	None.
Idaho	OJT, surveying and mapping.
Utah	Equipment company reps, university courses (few).
New Mexico	OFT, plat construction, OPM.
Colorado	OJT, remote sensing (DSC).
Montana	OJT, correspondence courses, MTP preparation (DSC), aerial photo DSC/SO, Land Law History (SO), Cadastral plat preparation, Army Home Study.
California	OJT.
ESO	L&M laws, use of patents.
Alaska	OJT, SO - short courses, professional conventions, ADP courses.
Oregon	OJT, professional conventions/workshops, university, OPM, equipment training - DSC.
Nevada	OJT, NCIC, DSC, SO, local universities, ICS.
DSC	Learning Center, OJT, local vocational schools.

Recommendation: Multi-agency training effort.

(Numerous no comments or don't know comments.)

Question 12. What training methods are currently available in your
training program?

Alaska	OUT, 3 day course - interpreting land status records.
Arizona	None.
California	OUT, surveying and mapping.
Colorado	Equipment company type, university courses (few).
Connecticut	OUT, civil construction, 32W.
Delaware	OUT, revenue training (20W).
Florida	OUT, correspondence courses, OUT preparation (20C), aerial course (20W), land law library (20), California first preparation, Army Home Study.
Georgia	OUT.
Idaho	14W law, one of papers.
Illinois	OUT, 30 - short courses, professional construction, 40P courses.
Indiana	OUT, professional correspondence, university, 20W. equipment training - 20C.
Iowa	OUT, 20W, 20C, 20P, local universities, 10P.
Kansas	Training Center, OUT, local vocational schools.
Kentucky	Recommendation: multi-agency training effort.
Louisiana	(Numerous no comments or don't know answers.)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 13 What type of training courses should be emphasized? (Please prioritize.)

	Basic Carto	Advanced Map Design	Auto Carto	Photo Interpretation	Other
Arizona	1	3	4	5	2
Wyoming	1	4	2	3	5
Idaho	1,1	2,2	4,5	5,4	3,3
Utah	3,5	2,4	1,1	4,2	3
New Mexico	No Ranking Available.				
Colorado	1,3,5	4,1,1	2,2,3	3,4,4	2
Montana	5,1,1, 1,1	2,2,2, 2,1,2	1,3,3, 3,4	4,4,4,3,2,3	3,5,4,5
California	3,1	1,1,4	2,1,4	2,1,5	3,2
ESO	1	4	5	3	2
Alaska	2,1,1, 1,3	5,5,4, 5,5	3,4,2, 3,1,1	4,3,3,2,4	1,2,2,5,4
Oregon	1,1,4, 1,1,1, 3,1,1	3,3,2, 3,3,2, 4,1,4	2,5,4, 4,4,5, 3,4	4,3,2,2,3,2, 5,2	5,5,1,5,1,2
Nevada	3,1	5	2	4,1,1	1
DSC	1,1,1, 4,2,3	5,1,1, 1,4,1, 3,1	2,1,3 1,1,2, 2,1,2,1	2,3,3,3,4,4	4,5,5
1.	25 (46%)	11 (20%)	11 (20%)	3 (6%)	4 (7%)
2.	2	10	11	9	7
3.	7	6	8	12	5
4.	1	9	9	13	3
5.	3	6	4	4	9

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 14. Who should be responsible for conducting mapping training programs?

	DSC	SO	Other Agency	Private
Arizona	Thematic maps	Int. of Status Rec., data compilation		
Wyoming			USGS or BLM	
Idaho	Basic Carto, Advanced Design, Photo Interp.		Graphic Arts, Auto Carto	
Utah	Centralized Training Ctr.			
New Mexico		All types		College credit courses
Colorado	None available, Special mapping	In-house video tapes		Printing, process, color, photog., repro. methodology, layout
Montana	?	?	?	?
California	DSC		Other Agency	Private
ESO	DSC	SO		Private
Alaska	Specialized training only	Internal training		
Oregon	Adv. carto, equip. Coord. at SO level, training, photog., basic carto geodetic inter- intra agency efforts			
Nevada	DSC to provide consistency in training develop- ment format, etc.	Majority of training, coordinator		
DSC	DSC	DSC/SO/Other Agency		

Question: 14. Who should be responsible for conducting training program?

Other Agency	DO	ESC
USCIS or FBI	Int. of States Rec. data Compilation	Thematic maps
Graphic Arts, Data Labs		Basic Carto, Advanced Carto, Photo Carto
		Computerized Training Sys.
	All types	
	In-house video tapes	None available, Special mapping
Other Agency		DO
	DO	DO
	Internal training	Specialized training only
	Adv. Carto, Photo Carto, etc. as in level, Training, Photo, Basic Carto	
	Majority of training, responsibility to agencies	DO to provide responsibility to agencies for training development and format, etc.
	Responsible agency	DO

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 15 How can training programs be evaluated to measure their effectiveness?

Arizona Review content of information presented.

Wyoming Questionnaires (person receiving training, supervisor, map users).

Idaho Product Review, employee morale, supervisory assessment (post training period 3 months).

Utah Questionnaire, compare cost/quality of mapping products.

New Mexico Production quotas, interviews, instructor evaluation.

Colorado Review quality/cost, compare to critical job elements.

Montana Product Review, employee written comments.

California Learning examinations.

ESO Review for reduction in interpretation mistakes, evaluation sheet.

Alaska Immediate and follow up written evaluation, quality/quantity reviews (product), trainee input.

Oregon Written follow up evaluations. Discussions with supervisors, PIPR, quality of product reviews.

Nevada Follow up evaluation, supervisor, performance review, instructor feedback.

DSC Formal testing procedures, other agency training program review, productivity/quality reviews, participant/supervisory response.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Organization

Vast majority of respondents did not provide any comments regarding the general question of organization structure. However, the comments which were received reflected the entire spectrum of alternatives from increased decentralization to increased centralization. (Refer to Enclosure 12)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 10. Organization.

Arizona	Bureauwide standardization.
Wyoming	Single agency should be responsible for "Base Map" production.
Idaho	Establish mapping as a separate Branch - Operations.
Utah	Bureauwide standardization.
New Mexico	Separate mapping entity.
Colorado	Separate mapping entity.
Montana	Establish separate Branch.
California	Single independent unit - within the SO.
ESO	-
Alaska	-
Oregon	-
Nevada	Locate technicians at the DO level.
DSC	As is, centralized, all related functions should at least be in close physical proximity to one another.

(Vast majority of respondents provided no comments.)

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Other

The major issue of concern addressed by map producing personnel who responded to question 16 dealt primarily with the lack of career ladders available to mapping personnel.

Utah

N/C.

New Mexico

Career ladders, interstate communications.

Colorado

N/C.

Montana

Career ladders, inadequate funding, contact with BSC/DO, improved project tracking.

California

Change in VMC standard symbols (intermediate scale maps).

ESD

Grades, promotion.

Alaska

Career development, utilized an effective employee suggestion system.

Oregon

Improved coordination with Information Systems, funding, increased staffing.

Nevada

N/C.

OSC

Grades, Government waste.

Interagency Working Group
Questionnaire 2
Consent to Respond

1997

The major issue of consent addressed by the participating personnel was responded
to positively in their authority with the lack of other federal activities in
existing personnel.

Bureauwide Mapping Study
Questionnaire B
Summary of Responses

Question: 16. Please address any other related issues, concerns or problems you feel were not adequately covered in the preceding questions.

Arizona	N/C.
Wyoming	N/C.
Idaho	Job classifications, grades, career opportunities.
Utah	N/C.
New Mexico	Career ladders, interstate communications.
Colorado	N/C.
Montana	Career ladders, inadequate funding, contact with DSC/WO, improved project tracking.
California	Change in USGS standard symbols (intermediate scale maps).
ESO	Grades, turnover.
Alaska	Career development, utilized an effective employee suggestion system.
Oregon	Improved coordination with Information Systems, funding, increased staffing.
Nevada	N/C.
DSC	Grades, Government waste.

BUREAU-WIDE MAPPING STUDY

QUESTIONNAIRE C

SUMMARY OF RESPONSES

QUALIFYING STATEMENTS

Questionnaire C represents the responses of Field Managers. Included within this group are: District Managers, Resource Area Managers, and Deputy State Directors. Also included are responses from two DSC Division Chiefs.

PRODUCT IDENTIFICATION

An overwhelming majority of respondents, ninety-seven percent (97%), felt that map or map products are an integral aspect of their planning/resource management efforts. (Refer to Enclosure #1)

There does not appear to be a Bureauwide consistency in identifying map products, not being produced in the Bureau which should be produced. (Refer to Enclosure #2)

There were map products identified which are currently produced/purchased which should not be. They include:

- Recreation maps - Wyoming
- Master Unit Maps - Oregon
- Metric Scale Maps - Utah
- Planmetric Quads 1"=1mile - Oregon
- BLM 30" Quad - Oregon
- USGS - Topo's (contracted) - Oregon
- Planmetric Maps - Arizona
- Map Product Duplication - Idaho

Additional information can be obtained from Enclosure #3.

There was no shortage of comments regarding what unique BLM features respondents felt should be included on Bureau maps. Unfortunately the transitory nature of certain features (e.g. administrative boundaries), do not lend themselves to incorporation on base maps. (Refer to Enclosure #4)

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

#1. Do you consider map or map related products, an integral part of your planning/resource management efforts?

	YES	NO
ESO	4	0
ALASKA	2	0
COLORADO	2	0
NEW MEXICO	3	0
UTAH	12	1
IDAHO	5	0
CALIFORNIA	4	0
MONTANA	6	1
DSC	2	0
NEVADA	2	0
WYOMING	9	0
OREGON	18	0
ARIZONA	7	0
TOTAL	74	0
%	(97%)	(3%)

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

#6. Are there map products not being produced in the Bureau which should be?

ESO	FMO at scale other than 1:100k.
ALASKA	Local status maps. (Large scale)
COLORADO	7½" QUAD with Land Status. <u>Good</u> transportation maps.
NEW MEXICO	Infra-red photography.
UTAH	Complete 5/8" = mile series. Good topo relief maps of Districts. Reduce USGS 7½" QUAD to 15" for field use. Increase 1:100K coverage USGS should complete 7½" coverage of BLM lands as promised in 1973.
IDAHO	Need 15" Topo coverage in addition to 7½". Need Districtwide recreation maps - incl. numerous features. Need ½"=1 mile with status and standard symbols.
CALIFORNIA	Need Topo/Hydrologic Regions, access maps, Public Land Guide maps and ½"=1 mile maps for public use (similar to FS).
MONTANA	Photo-Quads with Topo lines. Small scale maps based on planning & ES documents.
DSC	Digital resource info. - plottable to a minimum of 1:100K.
NEVADA	Better quality district maps for public distribution. Public Land Guides.
WYOMING	Special Project map - 1" = 1 mile, General multi-featured multi-agency map. Communication sites. Existing maps are inaccurate, outdated and incomplete. New R-series no improvement. Summary map of Oil and Gas units - 1:100U or 1:126U
OREGON	Topo coverage of Timber lands. Need 100% coverage. District recreation maps, revised 1:100U program. New 1:500U (Oregon and Washington). 20 foot contour maps. Up to date Forest maps. Do need general use maps for public distribution, Resource Area maps. 7½" series should be used as base map for BLM. Color QUADS needed at D.O.
ARIZONA	½" = 1 mile scale with current roads and topography of 100' contour intervals. Page size state land status maps, recreation maps, visitor use maps.

BUREAU-WIDE MAPPING STUDY

QUESTIONNAIRE C

SUMMARY OF RESPONSES

- #7. Are there map products being produced or purchased by the Bureau which should not be?

ESO	USGS should not charge BLM for QUAD maps. (37 STAT.497)
AKASKA	N/C
COLORADO	N/C
NEW MEXICO	N/C
UTAH	Maps with only metric scales should be discontinued.
IDAHO	Duplication exists in P.U. maps ($\frac{1}{2}$ " and 1") 30 min. QUADS and surface management type maps.
CALIFORNIA	N/C
MONTANA	N/C
DSC	N/C
NEVADA	N/C
WYOMING	Recreation maps too general to be useful. Eliminate redrafting and adding detail at S.O. level. - Should be done at D.O. BLM recreation map - replaced by USGS 1:100,000.
OREGON	Western Oregon - Master unit maps $\frac{1}{2}$ " = 1 mile, special EIS maps (need to adopt 1:100K) Easter Oregon - Planimetric Quads (30") 1" = 1 mile. Master title plats and cadastral survey plats should be in conformance and computerized. USGS TOPO (contracted) inaccurate. BLM 30" QUAD has no field value.
ARIZONA	Planimetric maps showing range improvements, sections etc. Grazing District Sheets.

BUREAU-WIDE MAPPING STUDY

QUESTIONNAIRE C

SUMMARY OF RESPONSES

#10. What uniquely significant BLM features should included on Bureau Maps?

ESO	Federal surface and mineral withdrawal ownership needs to be displayed by: commodity, percentage & planning unit.
ALASKA	All special area's - conservation, recreation, utility corridors, campgrounds, trails, facilities, historic sites, access, wild rivers, archeological areas.
COLORADO	Status, roads, admin. boundaries, minerals, geological features, elevations/water.
NEW MEXICO	ROW corridors, DO/RA boundaires, BLM access.
UTAH	Status, Admin. boundaires, water, minerals, vegetation types, fences, Cadastral Survey Guide., Topo, Section lines, Roads, recreation areas, cultural features.
IDAHO	Admin. boundaries, allotments, planning units, status, R/W's, Easements, special designations, withdrawals, ORV trails, firewood, Highway mile post markers, water, fences, improvements.
CALIFORNIA	Admin. boundaires, status, access.
MONTANA	Admin. boundaries, recreation maps, land status, water, access, roads, residences, highways.
DSC	Uniform land status - verified with State and Fed's.
NEVADA	Admin. boundaries (DO/RA) - 1:100U., Roads, water, Topo features Land status.
WYOMING	Land status (State-Private,PD), Admin. boundaries, special projects, roads, access, Topo features, cultural features, cadastral guides, contour lines, drainage.
OREGON	Admin. boundaries, land status (OECAN/P.D.), Forest type, transportation <u>Good</u> - Base map series would be enough, multi-agency features, land survey net, Topo, fire (control stations, utilities, roads, water, contours, major improvements, special management areas.)
ARIZONA	Land/Mineral status (Surface & Sub-surface), special designations, major facilities, Admin/Political boundaries, transportation, major Topo features, archeological sites, grazing allotments, drainage, perennial waters, rec. sites.

BUREAU-WIDE MAPPING STUDY

QUESTIONNAIRE C

SUMMARY OF RESPONSES

PLANNING & BUDGET

Seventy-five percent (75%) of the field respondents felt that they budget through the annual work plan (AWP) process for the production of map & map related products. (Refer to Enclosure #5.)

Many of the respondents who did not feel they utilize the AWP process, felt that the production of maps was usually included in miscellaneous procurements. This indirect planning for map needs apparently meets the "as-needed" purchasing requirements of field personnel. (Refer to Enclosure #6.)

State policies regarding the availability and pricing of map or map related products varies. (Refer to Enclosure #7.) The Arizona S.O. also reflected the consternation felt by various Bureau public's - over the lack of consistent pricing. (Refer to Questionnaire A, Enclosure #7a.)

Eighty-two percent (82%) of the responding field managers felt that there is an identified mapping coordination contact in their respective State Offices. Seven percent (7%) responded in the negative and eleven percent (11%) did not comment. (Refer to Enclosure #8.) There were no field offices (other than DSC) that overwhelmingly did not know of a central mapping coordination point. The uncertainty of who is the DSC mapping coordinator may be due in part to the fractionalization of mapping activities at DSC.

While the majority of field managers feel that they have the opportunity to provide input into map features (64%), twenty-seven percent (27%) do not.

Idaho appears to be at the extreme positive end of this continuum, while the greatest number of negative comments came from Utah. (Refer to Enclosure #9.) The majority of positive comments reflect a close coordinative relationship with their SO's or with USGS. (Refer to Enclosure #10.) The majority of negative comments also reflect the need for improved coordinative communication. (Refer to Enclosure #11.)

BUREAU-WIDE MAPPING STUDY

QUESTIONNAIRE C

SUMMARY OF RESPONSES

#2. Do you budget for the production of map and map products through the AWP process?

	YES	NO
ESO	3	1
ALASKA	2	0
COLORADO	1	1
NEW MEXICO	3	0
UTAH	8	4
IDAHO	5	0
CALIFORNIA	5	0
MONTANA	5	2
DSC	1	1
NEVADA	1	1
WYOMING	5	4
OREGON	13	5
ARIZONA	6	1
TOTAL	58	19
%	(75%)	(25%)

BUREAU-WIDE MAPPING STUDY

QUESTIONNAIRE C

SUMMARY OF RESPONSES

2. If "no", describe how map production needs are met.

ESO Quad maps purchased as-needed. Maps produced by Resource Specialist.

ALASKA Operations Chief conveys cost to user - who funds production costs. (??)

COLORADO Miscellaneous procurement

NEW MEXICO N/C

UTAH Identify under miscellaneous needs, some maps available on request.

No planning necessary.

IDAHO All disciplines contribute to an aggregate account from which map products are purchased. Planimetrics produced in W.O. - Paid on as needed basis.

CALIFORNIA Map costs included in total cost of a project.

MONTANA Special maps reproduced locally are not programmable.
SO - low demand, DO - high demand.

DSC Acquisition of existing available maps (BLM or USGS Quads).

NEVADA N/C, Initial preparation & updates scheduled by W.O.

WYOMING USGS quads - miscellaneous purchase. S.O. responsibility.

OREGON Lack of receipts results in lack of monies to invest in map production. Performed in operations section. Special map projects included in AWP, reproduction of existing maps is an operational cost - not specifically identified as a line item.

ARIZONA Replacement maps reproduced on Bruning Copier - charged to benefitting activities.

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

#4 What is the State policy regarding availability and pricing
of map or map product sales?

ESO	Advertise price(s) in federal register and through local newspapers.
ALASKA	Established land office products have standard prices (not specific).
COLORADO	Surface and mineral maps sell for \$1.50.
NEW MEXICO	Majority of respondents don't know. RA sell maps, DO do not.
UTAH	Unaware of Statewide policy. SO sets policy for DO. Price dependant upon size of map. Only DO sells to public. Sell only Utah State Travel maps.
IDAHO	SO sets prices on plammetrics. Unsure, DO sells plammetric and surface and minerals status. Would prefer a revolving account.
CALIFORNIA	Maps available through Public Room (SO), inconsistant availability and cost. Majority of respondents did not anwer.
MONTANA	SO periodically established. \$1.00 for recreation maps, \$1.50 for USGS Quads. No specific cost structure, sold at estimated cost.
DSC	(Not applicble)
NEVADA	Policy established at district level. Monies received, unfortunately are placed in general fund.
WYOMING	Minimal charges to cover printing costs. DO sell surface mgmt QUADS. \$2.50 - Surface Quads, \$1.00 Recreation maps. Don't know, established by SD. State has definite price structure for public sale.
OREGON	Map product pricing prepared by S.O., Inst. Memo issued, up to date price information is not readily available, don't know. 100K mpas \$2.00, Admin. maps priced in accord with BLM Manual (?) Public use map folders - free, prices are established to cover reproduction costs, master unit maps - not available, master unit map receipts sold at DO - placed in reimbursable fund. USGS Quad - \$2.00, master unit maps - \$2.00, transportation system maps - \$1.00, Litho printed - \$2.00, OZALID prints - \$1.00, some maps free, \$1.00 - copy, \$1.00 per copy at DO level for Bureau maps. Do not resell any USGS maps.
ARIZON	Sale price based on cost of production. EIS maps as part of EIS, by law must be distributed without cost. No comment SO determines price structure, not applicable at DO level.

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

#8. Is there a central coordination contact within the S.O. with whom
you can discuss all mapping planning and production problems/needs?

	YES	NO	NC
ESO	2	1	
ALASKA	1	0	1
COLORADO	1	0	1
NEW MEXICO	3	0	1
UTAH	4	1	0
IDAHO	5	0	0
CALIFORNIA	7	0	0
MONTANA	4	1	0
DSC	0	1	1
NEVADA	2	0	0
WYOMING	9	0	1
OREGON	16	1	1
ARIZONA	5	0	2
TOTAL	58	5	8
%	(82%)	(7%)	(11%)

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

#10A. Do you have the opportunity to make input into map features?

	YES	NO	NC
ESO	1	2	1
ALASKA	1	1	0
COLORADO	1	1	0
NEW MEXICO	1	0	3
UTAH	5	6	0
IDAHO	5	0	0
CALIFORNIA	1	2	2
MONTANA	5	2	0
DSC	-	2	-
NEVADA	2	0	0
WYOMING	7	2	0
OREGON	16	2	0
ARIZONA	5	1	1
TOTAL	49	21	7
%	(64%)	(27%)	(9%)

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

10B. If "yes", what mechanism is available to formally
incorporate these features into our mapping process?

ESO	N/C
ALASKA	N/C
COLORADO	Updating plat book - submitting to S.O.
NEW MEXICO	Consulting higher echelon.
UTAH	Review of draft copies, respond through D.O. coordinator. USGS request input on blue copy - 7½' maps.
IDAHO	Direct request by S.O. carto unit.
CALIFORNIA	S.O. routes for review.
MONTANA	PAWP addresses special concerns, corrections submitted to S.O.
DSC	N/C
NEVADA	Direct contact with S.O. (ongoing coordination). Corrections and changes rarely incorporated.
WYOMING	Ongoing coordination, memo to technical services, D.O. reviews all maps prior to final print.
OREGON	Close coordination maintained with S.O. & USG3., reviews are made by DO and changes submitted to S.O. S.O. has a mapping committee which meets infrequently.
ARIZONA	Review of draft maps made by specialist in S.O. Preliminary maps (7½ & 15 minnte quads) sent by USGS to D.O. for review. Don't know.

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

10C. If there is no formal mechanism, how do you or would you
incorporate changes?

ESO	During Division Chief meetings, bring to the attention of the "Head of FMMMP".
ALASKA	N/C
COLORADO	N/C
NEW MEXICO	Informally presented to next level of supervision.
UTAH	<u>All</u> maps should be sent to field for review (except: special project maps). All changes should be documented/distributed via memo.
IDAHO	Incorporate needed changes during PAWP or AWP time. Need for "USER" review prior to map production phase.
CALIFORNIA	Informal contact with S.O. Have USGS QUAD update Teams include DO/RA information as part of the update process. Have DO responsible for district changes.
MONTANA	Allow large scale draft map reviews by R.A. Provide ample time for review (e.g. 6 months). Recreation maps should be <u>sold</u> not given away.
DSC	N/C
NEVADA	Existing system would work if responsive.
WYOMING	Have field input to base on bluelines
OREGON	Need a statewide mapping committee. Develop thematic maps from EIS maps. Act upon mapping study recommendations - "Make some <u>decisions</u> - right or wrong"
ARIZON	Writer-Editor involvement in map design can incorporate changes in early design of maps. Provide district review of draft copies of maps. Need S.O. representative to visit field - explain S.O. expectations, and to identify available maps.

BUREAU-WIDE MAPPING STUDY

QUESTIONNAIRE C

SUMMARY OF RESPONSES

TRAINING

When asked if they felt the need for mapping related training for field personnel in FY 82 and FY 83, the overwhelming response was negative, 68% 63% respectively. On a state by state basis opinions were generally mixed. Those at a particular negative attitude appeared to be Utah, Montana, Oregon and ESO. (Refer to Enclosure #12.)

ORGANIZATION

Only one question was asked directed toward the organization location of mapping activities. The only trend appears to be the desire to decentralize some mapping functional responsibility to the DO levels. (Refer to Enclosure #13.)

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

#9 Was there a need for mapping related training for your field personnel in FY-82? FY-83?

	FY-82	YES	NO	FY-83	YES	NO
ESO		0	4		1	2
ALASKA		2	0		2	0
COLORADO		0	2		0	2
NEW MEXICO		0	3		1	1
UTAH		3	8		1	9
IDAHO		4	1		3	2
CALIFORNIA		2	2		2	2
MONTANA		0	7		2	5
DSC		0	2		0	1
NEVADA		1	1		1	1
WYOMING		3	6		4	4
OREGON		7	9		7	9
ARIZONA		1	5		1	5
TOTAL		23	49		25	42
%		(32%)	(68%)		(37%)	(63%)

BUREAU-WIDE MAPPING STUDY
QUESTIONNAIRE C
SUMMARY OF RESPONSES

#5. Are there mapping products being produced at the DO/SO or Service Center level which you feel should be produced at another level? Specify?

ESO	S.O. producing maps which could be performed at Field Office level. DSC-FMMMP role should be performed at S.O. level.
ALASKA	Digitized products should be produced at D.O.
COLORADO	N/C
NEW MEXICO	Carto-support should be included at D.O. level.
UTAH	S.O. prepare state maps, D.O. prepare local maps. DSC should <u>complete</u> 1:100K coverage.
IDAHO	Need to explore private sector to fulfill local map needs.
CALIFORNIA	N/C
MONTANA	DSC maps should be made by S.O. D.O. should continue to produce maps - avoiding duplication with S.O.
DSC	Need standard colors for all state, land status and recreation maps (?)
NEVADA	No
WYOMING	No
OREGON	Map production should be done at the lowest level where equipment and trained personnel are available. Most mapping should be contracted - D.O. level. maps should be a cooperative effort between DO/SO/DSC/USGS. Increase SO mapping capability. Forest type maps should be maintained at D.O. level. Approximately 60% of respondents had no comment.
ARIZONA	Some limited capability exists at D.O. level. Majority of respondents responded negatively.

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BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

QUALIFYING STATEMENTS

Questionnaire D represents a cross section of State, District and Resource Area functional specialists including: planners, wildlife biologists, archeologists, range conservationists, fire specialists, foresters, etc. The response rate varied between states but Bureauwide the response was very favorable. Responses to questions #2, #7 and #8 resulted in an exhaustive listing of maps, map products or area's of concern. For the sake of brevity, the questionnaire summary merely identifies these items which had the highest frequency of response.

PRODUCT IDENTIFICATION

The most commonly utilized maps or map products (refer to Enclosure #1) were

- USGS - Topo maps (all scales, 7-1/2' & 15')
- Aerial Photographs
- Ortho-Photo Quads
- Planimetric Maps

Unfortunately, we were not able to show a direct correlation between questions #2 and #3. However, generally speaking, field functional specialists perceive the vast majority of map products as being produced by other agencies or at their respective State Offices.

When asked if there functional activity contributed funding for the production of any/all maps utilized, the response for other than major resource activities was a "no comment".

The overwhelming majority of field personnel (84%) rated their mapping programs as being very important, or having top priority in overall Bureau objectives.

(Refer to Enclosure #2.)

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

#2. Please identify the most commonly used map(s) or map products used by your functional entity.

Nevada	Aerial photos, topo's, ortho-photo quads.
California	Aerial photos, topo's (all scales, 7-1/2 & 15.)
ESO	Topo's (1:250,000) aerial photo's, remote sensing.
Oregon	Aerial photo's, topo's (all scales), planimetric, orthographic photos.
Alaska	USGS-topo's, aerial photos's.
Wyoming	USGS-topo quads, aerial photos, orthophoto quads, BLM surface mineral quads, planimetrics.
Idaho	Aerial photos, topo's.
Utah	USGS-topo's, aerial photo's orthophoto
New Mexico	Topo's, aerial photo's.
Colorado	Aerial photo's, topo's, surface mineral color quads.
Montana	1:500,000 Recreation Maps, aerial photo's, topo's.
DSC	Topo's, aerial photos, landsat imagery.
Arizona	Topo's, aerial photos.

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

#6. How important do you feel the mapping program is to overall Bureau objectives.

	TOP	VERY		NOT SO	
	PRIORITY	IMPORTANT	IMPORTANT	IMPORTANT	UNIMPORTANT
NEVADA	0	1	0	0	0
CALIFORNIA	3	22	5	1	0
ESO	0	5	1	0	0
OREGON	25	42	5	0	0
ALASKA	1	4	1	0	0
WYOMING	4	17	3	0	0
IDAHO	5	3	1	0	0
UTAH	0	18	8	0	0
NEW MEXICO	6	31	8	0	0
COLORADO	3	17	4	1	0
MONTANA	4	8	0	0	0
DSC	3	8	3	1	0
ARIZONA	0	10	2	1	0
TOTAL	54	186	41	4	0
%	(19%)	(65%)	(15%)	(1%)	

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

PLANNING AND BUDGET

While upwards of 50% of respondents were not aware of their functional activities contribution to the production of maps or map products, a vast majority (97%) positively identified that they utilize map or map products as an integral aspect to the accomplishment of their work. (Refer to Enclosure #3.)

Questionnaire B identifies the concern of map producing personnel to improve communications with Bureau personnel requesting mapping assistance.

Questionnaire D reflects this concern for improved communications. When queried whether there was a mutual coordination contact within their office with whom to discuss mapping needs (Refer to Enclosure #4) the response was:

	<u>Yes</u>	<u>No</u>	<u>No Comment</u>
SO	77%	13%	10%
DO	71%	17%	12%
Internal DSC	<u>40%</u>	<u>53%</u>	<u>7%</u>
TOTAL	71%	18%	11%

Of particular concern should be the percentage of negative or nonresponse comments made by DSC personnel (60%). This is probably reflective of the organizational fragmentation of mapping related activities throughout DSC.

A majority of field personnel (86%) would like to see the Bureau pursue a concerted effort toward production of a map including multi-agency features. (Refer to Enclosure 5.)

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

#1. Do you utilize map or map products as an integral part of your work accomplishments?

	<u>YES</u>	<u>NO</u>
NEVADA	1	0
CALIFORNIA	32	0
ESO	5	1
OREGON	76	0
ALASKA	7	0
WYOMING	23	0
IDAHO	9	0
UTAH	26	0
NEW MEXICO	42	3
COLORADO	23	0
MONTANA	12	0
DSC	12	3
ARIZONA	12	1
TOTAL	280	8
%	(97%)	(3%)

Enclosure 3

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

#4. Is there a central coordination contact within the DO/SO with whom you can discuss your mapping needs?

	<u>YES</u>			<u>NO</u>			<u>NO COMMENT</u>		
	<u>SO</u>	<u>DO</u>	<u>TOTAL</u>	<u>SO</u>	<u>DO</u>	<u>TOTAL</u>	<u>SO</u>	<u>DO</u>	<u>TOTAL</u>
NEVADA	1	0	1	0	0	0	0	0	0
CALIFORNIA	11	4	15	6	7	13	3	0	3
ESO	5	0	5	0	0	0	1	0	1
OREGON	0	47	47	0	14	14	0	12	12
ALASKA	0	5	5	0	0	0	0	0	0
WYOMING	20	0	20	5	0	5	0	0	0
IDAHO	3	6	9	0	0	0	0	0	0
UTAH	1	20	21	0	4	4	0	0	0
NEW MEXICO	6	23	29	2	6	8	2	0	2
COLORADO	15	7	22	0	0	0	3	0	3
MONTANA	5	7	12	0	0	0	0	0	0
DSC			6			8			1
ARIZONA	1	6	7	0	0	0	0	6	6
TOTAL	68	125	199	13	31	52	9	18	28
%			(71%)			(18%)			(11%)

Enclosure 4

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

#7. Should BLM pursue the production of a map with multi-agency features such as USFS, USFW, County, State and BLM data on one map, where all entities occupy adjacent lands?

	<u>YES</u>	<u>NO</u>	<u>NO COMMENT</u>
NEVADA	1	0	0
CALIFORNIA	25	4	3
ESO	6	0	0
OREGON	63	9	2
ALASKA	4	1	0
WYOMING	22	1	0
IDAHO	8	1	0
UTAH	24	0	0
NEW MEXICO	35	9	1
COLORADO	27	1	0
MONTANA	11	1	0
DSC	13	1	1
ARIZONA	<u>6</u>	<u>4</u>	<u>3</u>
TOTAL	245	32	9
%	(86%)	(10%)	(4%)

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

TRAINING

Generally speaking, field personnel did not indicate a strong desire for mapping related training. (Refer to Enclosure 6.) Sixty percent (60%) of respondents either answered in the negative or did not answer at all.

Only forty percent (40%) of respondents did favor some type of map training for field personnel.

Only thirty-four percent (34%) of the respondents who favored some type of mapping training felt that this would be considered a top priority training program! (Refer to Enclosure 7.)

An assumption which could be postulated would be that field personnel would like to see less spent on training and more on mapping production.

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

#5. Can you identify any mapping related training which could improve your ability to perform your function?

	<u>YES</u>	<u>NO</u>	<u>NO COMMENT</u>
NEVADA	0	1	0
CALIFORNIA	13	18	1
ESO	0	6	0
OREGON	23	48	0
ALASKA	3	3	0
WYOMING	11	13	2
IDAHO	6	4	0
UTAH	16	8	0
NEW MEXICO	13	31	2
COLORADO	13	11	1
MONTANA	8	4	0
DSC	5	9	1
ARIZONA	<u>4</u>	<u>9</u>	<u>0</u>
TOTAL	115	165	7
5	(40%)	(57%)	(3%)

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

#5. If "yes", would you consider this a top priority training need?

	<u>YES</u>	<u>NO</u>	<u>NO COMMENT</u>
NEVADA	-	-	-
CALIFORNIA	5	7	1
ESO	0	6	0
OREGON	15	19	0
ALASKA	3	0	2
WYOMING	7	7	0
IDAHO	2	3	3
UTAH	7	12	0
NEW MEXICO	4	9	8
COLORADO	3	12	9
MONTANA	5	5	0
DSC	0	7	8
ARIZONA	<u>1</u>	<u>2</u>	<u>10</u>
TOTAL	52	88	14
%	(34%)	(57%)	(9%)

*Please
omit.*

BUREAUWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

OTHER

Please address any other related issues, concerns or problems you may have regarding your mapping related needs:

The most often referred to comment received regarded the "Updating of Current Mapping Products."

Based on field personnel responses to questions concerning training and miscellaneous issues, concerns and problems, it appears that the updating of maps rather than training in map use is of greater concern to employees.

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NATIONWIDE MAPPING STUDY

QUESTIONNAIRE D

SUMMARY OF RESPONSES

OTHER

Please address any other related issues, concerns or problems you may have

regarding your mapping related needs:

The most often related to comment received regarding the "Updating of Current

Mapping Products."

Based on field personnel responses to questions concerning training and

skill-related issues, concerns and problems, it appears that the updating of

maps rather than training in map use is of greater concern to employees.

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